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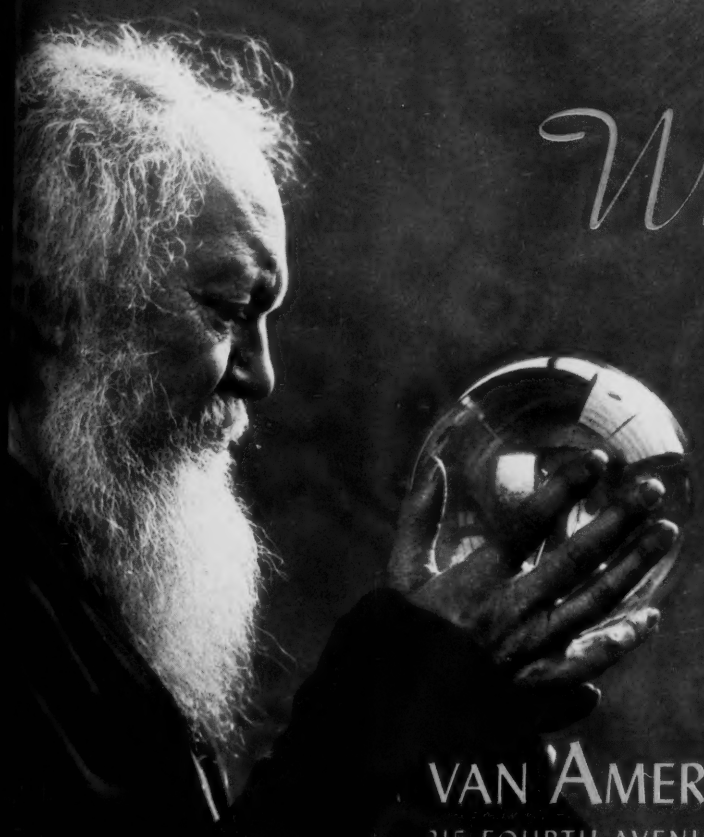
SOAP and SANITARY CHEMICALS



Who knows?

No sage can truly foretell the future these days but, for the present, van Ameringen-Haebler, Inc., is still supplying fine perfume materials. Where supplies of Naturals have been cut off, excellent synthetics and aromatic chemicals, the results of years of research, are ready to take over.

VAN AMERINGEN-HAEBLER, INC.
315 FOURTH AVENUE NEW YORK CITY

June 1941

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MOSCOW

No Compromise . . .

IN time of war, as well as in time of peace, there is no compromise with quality in DODGE & OLCOTT COMPANY products. For well over a century, through scarcities resulting from war and other causes, D & O has never deviated from its long-established high standard. Even in the present scarcity of natural oils, to the extent of our ability to supply, quality is scrupulously maintained.

FOR those who desire *synthetic substitutes* for the natural oils—substitutes which reproduce the odor effect with maximum fidelity in finished toilet soaps, shampoos, cosmetics, and perfumes at a marked saving in cost—D & O can supply products backed by many years of perfuming experience. Let us tell you more about these D & O substitutes for natural oils, and the economies they can effect for you!

DODGE & OLCOTT COMPANY

180 Varick Street — New York, N. Y.

D&O
ESTABLISHED IN 1798

BOSTON : CHICAGO : PHILADELPHIA : ST. LOUIS : LOS ANGELES

Plant and Laboratories . . . Bayonne, N. J.

Labeled right TOO!

FULD MAKES IT FOR THE LEADERS IN BULK or packaged under PRIVATE LABEL

Fuld Private Label Service means something, for it provides dealers with accurate information complying with all government label regulations, as well as direction requirements.

BREVITEE Liquid METAL POLISH

Thick Enough! Thin Enough! Fast Enough! This polish started something by proving that it isn't the time or the aching muscles that makes the luster. You can recommend Brevitee as the permanent walk-out on hard polishing that delights just about everybody.

FULEX UPHOLSTERY and RUG SHAMPOO

Fulex is the concentrated liquid shampoo that builds volumes of dirt-eating suds from a 1 to 15 water dilution. Those suds are restoring the finest fabrics in the safest and swiftest way. Put Fulex on your Must-know-about list for this year.

ANTIFECT DISINFECTANT

Athletes' Foot Treatment and Prophylactic Agent in Foot Baths

An exclusive Fuld Development. Antifect gives you a chance to catch up with the demand for an effective "club-house combination" Odorless Disinfectant and Athletes' Foot Treatment. Has a guaranteed coefficient of 3 F.D.A. against Staphylococcus aureus and 3 F.D.A. against Eberthella typhi.

"TOPPER" SOAP DISPENSER

The "Topper's" precision valve chops off as clean a stream of soap as the higher priced dispensers and it has cut itself a neat slice of the fixture business. Easy to fill; easy to operate; easy to look at; HARD to escape buying or selling.

Selling Jobbers ONLY!

DEODORANT BLOCKS
LIQUID DEODORANTS
LIQUID CLEANERS
LIQUID SOAPS
OIL SOAPS
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DISINFECTANTS
SELF POLISHING WAXES
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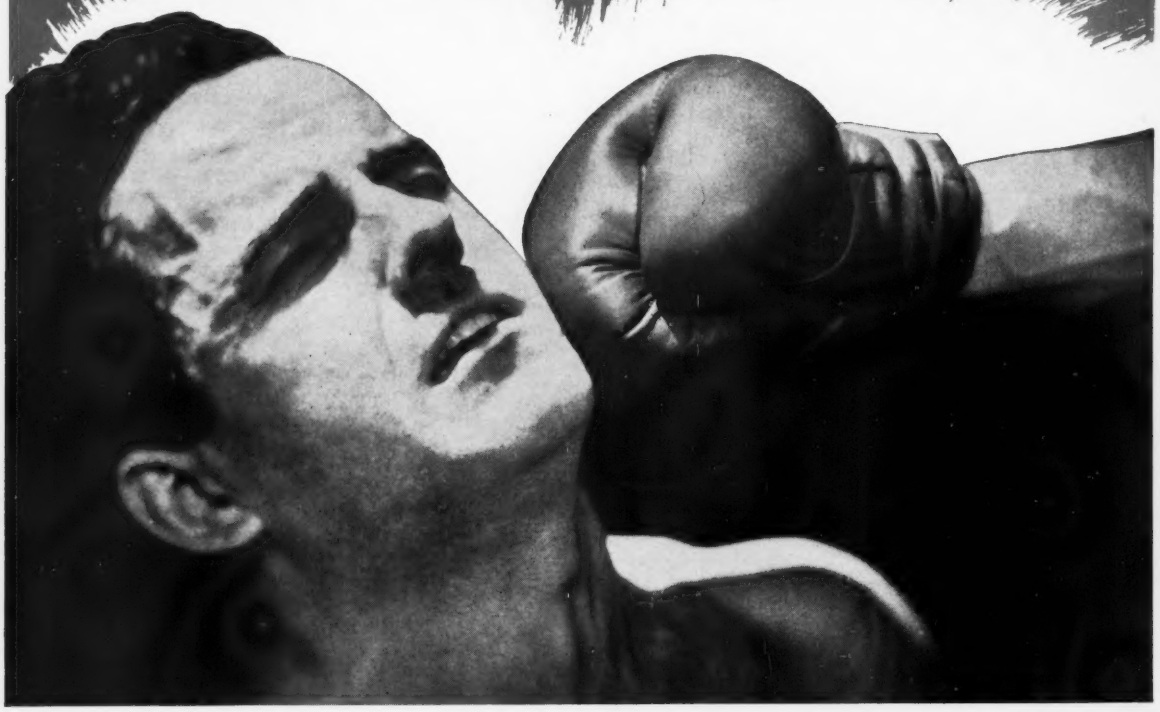
Can YOUR Product TAKE IT!



A PROPERLY fixed, fairly priced and full strength perfume raw material will stand up and take it. The aroma and bouquet will actually improve in the product whether it be Toilet Soap, Shaving Cream, Shampoos, Bath Salts or other items in your line.

The perfume raw material manufacturer who operates on this policy works on a small margin of profit to give you an honest product—fairly priced.

Where YOU come out ahead is that YOUR finished product will have the same pleasant bouquet and customer appeal at the time of its sale and use as when you originally put it into the package.

Aromatics Division

GENERAL DRUG COMPANY

644 PACIFIC ST., BROOKLYN, N. Y.
TRANSPORTATION BLDG., LOS ANGELES
9 S. CLINTON ST., CHICAGO
1019 ELLIOTT ST., W., WINDSOR, ONT.

Volume XVII Number 6

SOAP and SANITARY CHEMICALS

Reg. U. S. Pat. Office

JUNE
1941

●

SANITARY Products Section, which forms a part of every issue of SOAP, begins on page 79.

MEMBER AUDIT BUREAU OF CIRCULATIONS

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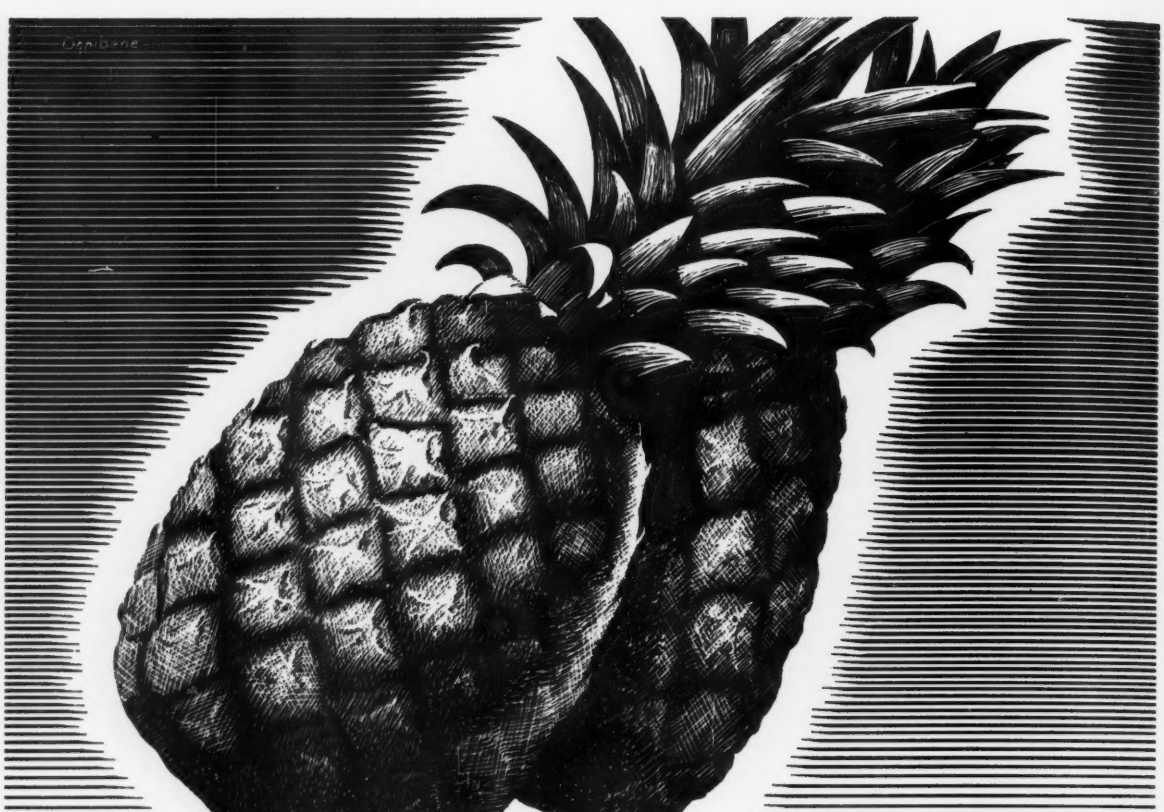
Published by

MAC NAIR-DORLAND COMPANY, INC.
254 WEST 31st STREET NEW YORK, N. Y.

Subscription rate, $3.00 per year. Foreign, including Canadian, $4.00. Copy closing dates—22nd of month preceding month of issue for reading matter and 10th of month preceding month of issue for display advertising. Reentered as second-class matter, Feb. 9, 1938, at Post Office, New York, under act of March 3, 1879. Mail circulation, May, 1941, issue, 4,083 copies. Total circulation, 4,350.



Good from the Start

Starting right, with good seed in good soil, is one of the surest ways to get fine results in growing things — and it is the same with manufactured products. Care in the selection of raw materials is essential in every responsible manufacturing organization. Niagara Alkali Company provides assurance of quality by the most scrupulous attention to every detail in the production, testing and handling of the materials it supplies to various industries. Why not give your products the benefit of a good start with Niagara Caustic Soda, Caustic Potash or Carbonate of Potash.

Niagara ALKALI COMPANY

60 EAST 42nd STREET, NEW YORK, N. Y.

Affiliated with Electro Bleaching Gas Company, Pioneer Manufacturer of Liquid Chlorine

PARA
CAUSTIC SODA
CARBONATE OF POTASH
CAUSTIC POTASH

20,000 people are ready to call you "BOSS"

THESE 20,000 people are in the business of making containers.

Some of them are research men . . . some marketing men . . . and some engineers. *Their* job is to help package products in the *right* container.

Among these 20,000 people, are also scientists who solve all sorts of packaging problems. . .

. . . and efficiency experts who improve packaging methods, cut down packaging costs.

... and Sales Roadmen to watch over your closing machines as well as salesmen to give you prompt, helpful service.

You'll find merchandising and advertising men, too. *Their* specialty is promoting packaged products.

Then, to keep container-making factories all over the country turning out regular and rush orders, there are executives with their secretaries, mechanics and laborers, truckmen and truck drivers.

These 20,000 people make up American Can Company.

Whenever you place an order with American Can Company, you put these 20,000 people to work for you. Your problems become *their* problems. And, in a real sense of the word, they call you "boss."

AMERICAN CAN COMPANY

230 Park Avenue • New York, N. Y.

What American Can Puts Against Packaging Problems

- 5 laboratories employing 134 people college trained in the pure, natural, and engineering sciences.
- 13 points from which customers' machinery is serviced . . . 6 points at which customers' machinery is built.
- 67 plants located strategically in the U. S., Canada, and Hawaii.
- A factory-trained sales staff who are specialists in many different types of industry.
- An executive personnel backed by a financial strength that is in itself a tangible business asset.

CANCO

the Candys

hav

. . . and it's doing fine, thank you! With so many outstanding Top All-Round Qualities to start out on, Candy's expect great things from their latest youngster. *SparX* has a family background of *really successful* relations — like Bright Beauty, for instance. *SparX* will be brought up on the best grade of prime Carnauba Wax plus skillful blending that's had 50 years of experience and the best of results . . . *that's a pedigree worth boasting about!* It won't be long before *SparX* will be welcome company on your present and many new customers' floors.

Instead of cigars, we're only too willing to pass out samples for you to test in your own laboratories. You will see for yourself that *SparX* really has what it takes to make floor wax sales grow. WRITE OR WIRE TODAY!

new baby!

SPARX
SELF POLISHING
FLOOR
WAX
NON-INFLAMMABLE
• LUSTRE WITH A SPARKLE
• DURABILITY — PROTECTION
• Water Resistance—No Spots
• NOT SLIPPERY — SAFETY
A Product with Outstanding Top All-Round Qualities
Use only on a floor that has been thoroughly cleaned with material and method recommended for your floor, and rinsed with water and dried.
Apply with a short strand mop, applicator, cloth or soft brush. Two thin coats applied an hour or two apart will perform better than one heavy coat.
Material dries to a sparkling lustre in ABOUT 20 minutes without buffing, but buffing adds to the appearance and durability.
Surface dirt may be removed by damp mopping, and "dry cleaning" may be done best by steel-wooling and application of a thin film of wax.
Buffing will remove scuff marks.
Use on linoleum, rubber, sealed varnished or painted wood floors, and on asphalt base tile floors.
Made Only By
CANDY & COMPANY, INC.
2515 W. 35th St. Chicago, Ill., U.S.A.
KEEP FROM FREEZING

SparX meets special requirements for a wax that will take more water abuse because of its harder surface. Like Bright Beauty waxes, SparX possesses the same all-round qualities of lustre, ease of spreading and clarity that allows full depth of the treated floor's coloring to show through.

Sold Through Distributors Only

SparX wax will be sold through distributors only*; never direct to the consuming trade. It is our unalterable policy never to compete with our jobbers. Competitively priced to allow your usual mark-up.

*Except for experimental accounts in Chicago, essential to research.

CANDY & COMPANY, INC.

WAX SPECIALISTS FOR 50 YEARS

2517 WEST 35th STREET, CHICAGO, ILLINOIS

"Alpine Violet" CYCLAMEN ALDEHYDE

A domestic product from domestic raw materials

A VALUABLE ALTERNATE FOR HYDROXYCITRONELLAL

● *"Alpine Violet" has odor characteristics similar to those of Hydroxycitronellal — is used in the same way — and the source of supply is dependable.*

The power of "Alpine Violet" makes it economical to use. Although an aldehyde, it is extremely stable in soap. It is non-irritant, and does not discolor.

In considering "Alpine Violet," ask for help that we may be able to give as a result of our long experience in blending this powerful synthetic into many soap formulas. Write Du Pont Aromatics Section, 40 Worth Street, New York City.

DU PONT
REG. U.S. PAT. OFF.

Aromatics

Du Pont makes many important synthetic aromatics from domestic raw materials, including:

*Astrotone**
Isobornyl Acetate
Skatole
Dimethyl Anthranilate
Coumarin
Methyl Anthranilate
Indole
Anisic Aldehyde
Musk Xylole

*REG. U. S. PAT. OFF.

E. I. DU PONT DE NEMOURS & CO. (INC.), ORGANIC CHEMICALS DEPARTMENT, FINE CHEMICALS DIVISION, WILMINGTON, DELAWARE

APPLYING SUPER WAX
WITH HYSAN APPLICATOR

Sell WATERPROOF SuperWax

— FOR HIGHER GLOSS, LESS SLIP, AND LARGER YEAR 'ROUND PROFITS

• **SUPER-WAX is the *premium quality* self-polishing liquid floor wax that sells at a popular price. You lay down SUPER-WAX side by side with costlier waxes and SUPER-WAX gets the call on *higher gloss and less slip.***

The higher gloss holds up after dozens of scrubbings. During heavy weather traffic, rush hours, conventions—in crowded corridors, waiting rooms—next to open doors, in elevators, under constant grind of heel and toe . . . SUPER-WAX stays glossy, foot safe and smear-repellent between applications.

Get behind this self-reselling profit maker and watch it spark your entire floor treatment line. Available for private label. Mail coupon for test sample.

Made from No. 1 Yellow Prime Carnauba Wax — the World's Finest.

CLEANERS • DISINFECTANTS • SOAPS • DEODORANTS • DEODORANT BLOCKS • INSECTICIDES • POLISHES • WAXES

HYSAN
SHIPS IT FASTER

HYSAN

MANUFACTURING CHEMISTS

PROTECT YOUR LABEL WITH HYSAN QUALITY

Hysan Products Company
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☐ Send sample of SUPER-WAX.
☐ Send New Hysan Catalog.
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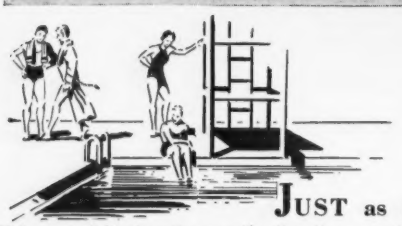
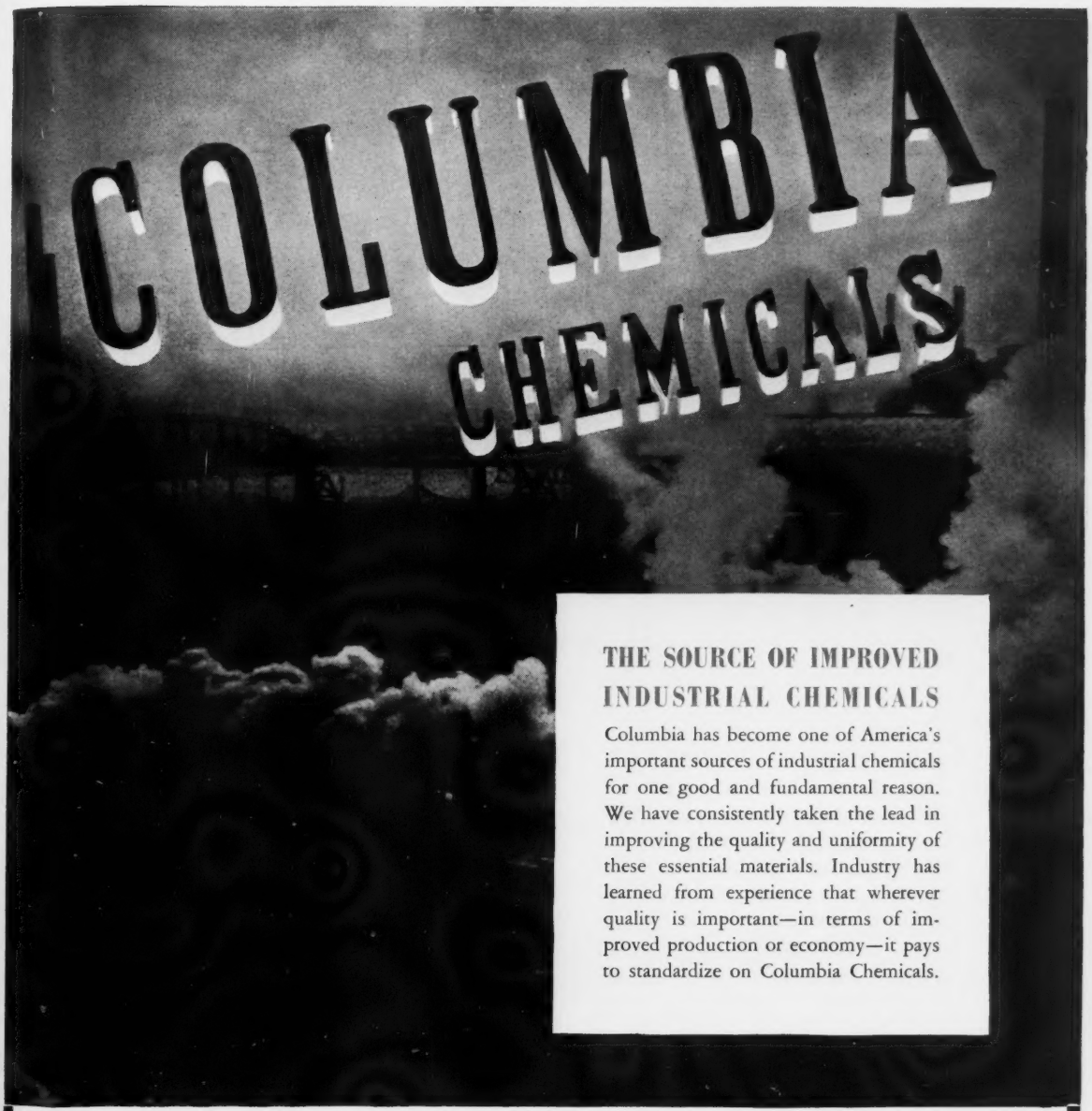
ON GUARD!

KORK-N-SEAL Protects the Purity and Quality of PERCHLORON



JUST as the lifeguard helps keep the bathers safe—and PERCHLORON helps keep the water safe—KORK-N-SEAL safeguards the contents of every can of PERCHLORON . . . a bactericide and deodorant made by The Pennsylvania Salt Manufacturing Company. KORK-N-SEAL—the closure with the handy little lever—is a thoroughly dependable original seal. It is exceptionally easy to remove and is also a convenient, positive re-seal! Samples, prices and complete information will be sent promptly without obligation. Write to: The Williams Sealing Corporation, Decatur, Illinois—*a Division of Crown Cork and Seal Company.*



THE SOURCE OF IMPROVED INDUSTRIAL CHEMICALS

Columbia has become one of America's important sources of industrial chemicals for one good and fundamental reason. We have consistently taken the lead in improving the quality and uniformity of these essential materials. Industry has learned from experience that wherever quality is important—in terms of improved production or economy—it pays to standardize on Columbia Chemicals.

ESSENTIAL INDUSTRIAL CHEMICALS

SODA ASH • CAUSTIC SODA • SODIUM BICARBONATE • LIQUID CHLORINE
SILENE • CALCIUM CHLORIDE • SODA BRIQUETTES • MODIFIED SODAS
CAUSTIC ASH • PHOSFLAKE • CALCENE • CALCIUM HYPOCHLORITE

COLUMBIA
COLUMBIA CHEMICALS

PITTSBURGH PLATE GLASS COMPANY

Columbia Chemical Division

30 ROCKEFELLER PLAZA

NEW YORK, N.Y.

Chicago • Boston • St. Louis • Pittsburgh • Cincinnati • Cleveland • Minneapolis • Philadelphia • Charlotte

EASY LESSON FOR SOAP-MAKERS!

LAVENOLA is but one of a number of exceptional products which the Felton laboratories have successfully synthesized to replace many natural products no longer available.

Inquire about those which are of special interest to the soap manufacturer.

WRITE FOR A SAMPLE TODAY...

FELTON CHEMICAL CO.

599 Johnson Ave., Brooklyn, N. Y.

Manufacturers of Aromatic Chemicals, Natural Derivatives, Perfume Oils, Artificial Flower and Flavor Oils.

BRANCHES IN PRINCIPAL CITIES

STANDARD SILICATE

When you use STANDARD SILICATE you gain, not only lower costs and uniform quality, but also these four potent sales values—

1. IMPROVED KEEPING QUALITIES

A small percentage of STANDARD SILICATE retards rancidity of soap.

2. EXTRA DIRT-REMOVING POWER

Your customers get cleaner, whiter washes with soap that contains Standard Silicate.

3. BETTER SOAP FLAKES

You will have less fines and better bulk when small amounts of Standard Silicate are added in the making.

4. MAXIMUM SUDSING POWER

Better action is obtained when Standard Silicate is present.

Let our Technical Division help you choose the right STANDARD SILICATE for your soap.

DIAMOND ALKALI COMPANY • Standard Silicate Division

Plants at CINCINNATI · JERSEY CITY
LOCKPORT, N.Y. · MARSEILLES, ILL.

General Offices • PITTSBURGH, PA.

THE BLENDER'S ART

THAT RIVALS NATURE'S

The arranging of flowers in a bouquet – blending their colors to create harmonies not found in Nature – is a specialized accomplishment, requiring an instinctive gift and sense of arrangement. In much the same way, the perfume chemist, as he blends his materials to create new and distinctive bouquets, must possess a special intuitive feeling for perfume compounds as well as experience in their application.

The perfumers and chemists of Givaudan's staff are men in whom this natural gift has been fully developed by their long training in their special field. Their ability to create new and unusual odors is demonstrated by the many products of Givaudan's laboratories which have been successfully utilized by leading manufacturers of perfumes and cosmetics to increase sales volume and effect production economies.

Whether you are seeking a new odor for a single special product – or adapting a complete line of cosmetics to meet seasonal or changing fashion trends – you can profit by the skill of Givaudan chemists. We will be glad to offer recommendations on specific problems.

Broadening the Sources of Supply for Essential Raw Materials

The shortage of essential raw materials of foreign origin is becoming increasingly severe, and many products are now completely unobtainable.

Counterbalancing this shortage, Givaudan's consistent policy of product research and development is constantly making new substitute materials available. Artificial Geranium Bourbon, Bergamot Artificial, Vetiver Bourbon Artificial, Resin Orris Artificial, Mousse de Chene Artificial, Patchouli Artificial, Rhodinol A.A., and Ylang Ylang Artificial are among the American-made products that have been developed in Givaudan's laboratories, and new ones are continually being added.

You can help to safeguard your sources of supply by investigating these Givaudan products. Samples and complete information are available on request.

GIVAUDAN-DELAWANNA, INC.

330 WEST 42ND STREET • NEW YORK, N. Y.

OPPORTUNITY OPEN

to speed your processing operations, improve your finished products, cut your processing costs.

APPLY

SANTOMERSE No. 1, the modern, all-purpose organic detergent and surface active agent.

SANTOMERSE No. 1 is an alkyl aryl sulfonate. Supplied in flake form, it is readily soluble in soft or hard water and in solutions of acid or alkali. In addition to its wetting, spreading, penetrating and dispersing qualities, SANTOMERSE No. 1 has excellent cleaning or detergent properties and rinses easily.

Textile, paper and leather processing operations find SANTOMERSE No. 1 an economical and efficient aid.

SANTOMERSE No. 1 is a valuable addition to cleaning and scouring compounds, and is also widely used alone for cleaning and wetting. For further information, inquire: MONSANTO CHEMICAL COMPANY, Phosphate Division, St. Louis, U. S. A. District Offices: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Montreal.

MONSANTO PRODUCTS INCLUDE:

- Phosphorus
- Phosphorus Pentoxide
- Phosphoric Acid
- Ferro Phosphorus
- Mono Calcium Phosphate
- Di Calcium Phosphate
- Tri Calcium Phosphate
- Magnesium Phosphates
- Phosphoric Acid Paste
- Ammonium Phosphates
- Mono Sodium Phosphate
- Di Sodium Phosphate
- Tri Sodium Phosphate
- Sodium Acid Pyrophosphate
- Tetrasodium Pyrophosphate
- Tetra Potassium Pyrophosphate
- Iron Phosphates
- Aroclors
- Santomerse

MONSANTO CHEMICALS

SERVING INDUSTRY . . . WHICH SERVES MANKIND

Countless Miles of Floors

ARE MAINTAINED BY "BEAMAX"

YEARS OF USER-SATISFACTION ARE BEHIND THIS PRODUCT

"BEAMAX" is well known to thousands of users as a lustrous-drying Liquid Wax that always delivers full value. Economical—because a thin coat dries in a few minutes to a hard, lustrous beautiful finish, without polishing. It smooths itself. All types of floors—including rubber, wood, linoleum, rubber tile, asphalt tile, mastic, terrazzo and cement — are easily kept clean by sweeping or using a dry mop. "BEAMAX" will not solidify in storage. It has no unpleasant odor. Samples and prices of "BEAMAX" will be sent to you on request.

THE DAVIES-YOUNG SOAP COMPANY
DAYTON, OHIO

Norda

Scarcity of floral oils . . .

Present dwindling supplies of natural floral essences emphasize the value of high quality substitutes.

Synthetic floral essences can be used to replace the natural oils with full satisfaction and marked success in numerous products,—toilet soaps, shampoos, shaving creams, powders, creams, and many others.

In fact, in many products the newer synthetic floral essences are to be *preferred* for the manner in which they reproduce the true fragrance of the living flowers in the finished product,—not to mention uniformity of quality and odor fidelity, and their economy under present conditions.

Let us tell you more about these newer substitutes as an answer to the growing scarcity of natural floral oils.

NORDA Essential Oil and Chemical Co., Inc.

Chicago Office
325 W. Huron St.

Los Angeles Office
2800 E. 11th Street

St. Paul Office
253 E. 4th St.

Toronto Office
119 Adelaide St., W.

New York Office
601 West 26th St.

Montreal Office
135 Commissioners St., W.

At Last *Engineered—in*

STURDINESS

The New ABUSE-PROOF DISPENSER

to boost your Soap Powder Sales!

Combines These Outstanding Features:

- **EXTRA HEAVY BRASS** container . . . dent, mar and blow resistant.
- Gleaming **POLISHED CHROME** finish.
- New design, unique dispenser-unit . . . **PLASTIC THRUST-IN SELF-CLEANING PLUNGER** . . . no caking, clug preventive.
- Inside agitator **FLOWS** soap powder smoothly.
- Water can't get inside.
- One Quart capacity.
- Wide opening (entire top) cover, for easy, quick refilling.
- Inside-locking cover (optional).
- Heavy stamped mounting for rigid attachment to wall or pipe.
- Use your own nameplate.
- Size overall, 8" high x 4¼" diam.

A New Super-Salesman for soap powder

that will profitably promote use of your soap powder because it has modern beauty-styled eye-appeal, is foolproof in operation and ruggedly constructed for extra long life. Fully guaranteed. Priced extremely reasonable!

(We do not sell soap powder)

CHICAGO PRECISION PRODUCTS CORPORATION

820 WEST ERIE STREET **CHICAGO, ILL.**

Designers and Manufacturers of Industrial Soap Powder Dispensers and Quality Household Specialties

Write for a Sample

For Examination. No Obligation. Returnable.

Mail Coupon Today!

CHICAGO PRECISION PRODUCTS CORPORATION,
820 W. Erie St., Chicago.

Send a sample of Type 3A Powdered Soap Dispenser, which we may return, without obligation.

Signed .....
Firm .....
Street and No. .....
City, State .....

University of Idaho LIBRARY MOSCOW, IDAHO

THE SATURDAY EVENING POST

NOW'S THE TIME FOR HOME DEFENSE!

▸ Speaking of defense experts, meet the most important little squirt in the house.

It's the squirt that defends your home against flies, and your children against infection. The squirt that makes life unhealthy for mosquitoes—so that they won't make life unhealthy for you. The squirt that protects your clothes against moths, and your garden against insects.

Every "filth columnist" you kill *early* in the summer means that masses of his descendants won't bother you later on. So start your insect blitzkrieg now.

Modern insecticides come to you with their full strength protected, packed safely in cans that neither break nor chip. Buy a can and get going today!

• • •

For best results when spraying for flies or mosquitoes, shut windows and doors so mist will not escape. Use plenty of spray. Aim at ceiling so mist will settle downward.

When using moth crystals or spray, turn pockets of clothing inside out, get at cuffs, pleats, folds, collars, lapels. Washable woolens should first be washed and thoroughly rinsed.

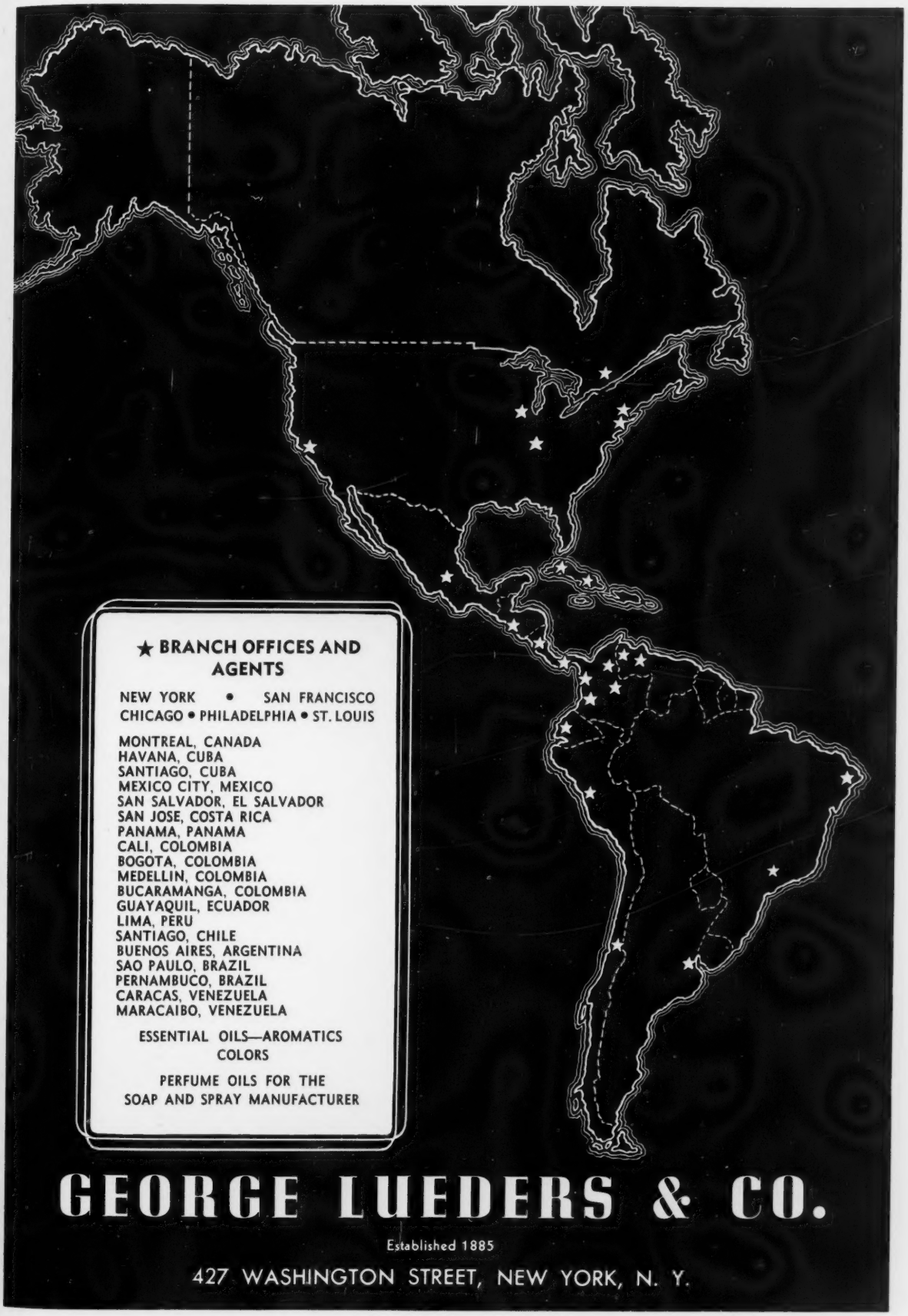
Insecticides—one of the many good things you buy in cans

If you were a businessman ten years ago, you probably remember some of the things that weren't packed in cans at that time . . . MOTOR OIL . . . BEER . . . APPLE JUICE . . . CREPES SUZETTE . . . GRAPE JUICE . . . CHEDDAR CHEESE. Today cans are the modern, convenient package for all of them. What next? You get the answer to that by putting trained technologists, packaging experience and research laboratories to work for you. If your business has a packaging problem, you'll get quick action by bringing it to Continental. Just write Continental Can Company, 100 E. 42nd Street, N. Y. C. Fifty offices and plants in the U. S. A., Canada and Cuba.

CONTINENTAL CAN COMPANY

IF YOU PUT A PRODUCT UP . . . PUT IT UP TO CONTINENTAL

This striking full page, *full color* ad will appear in the June 14th issue of the Saturday Evening Post and is designed to support the manufacturers of insecticides. It's the third of Continental Can Company's Post series promoting products that come in cans, and helping our customers boost sales. Free reprints and a booklet, "Gunning for Extra Sales," are yours for the asking.


★ BRANCH OFFICES AND AGENTS
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MONTREAL, CANADA
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SAN JOSE, COSTA RICA
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CALI, COLOMBIA
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MEDELLIN, COLOMBIA
BUCARAMANGA, COLOMBIA
GUAYAQUIL, ECUADOR
LIMA, PERU
SANTIAGO, CHILE
BUENOS AIRES, ARGENTINA
SAO PAULO, BRAZIL
PERNAMBUCO, BRAZIL
CARACAS, VENEZUELA
MARACAIBO, VENEZUELA
ESSENTIAL OILS—AROMATICS
COLORS
PERFUME OILS FOR THE
SOAP AND SPRAY MANUFACTURER
GEORGE LUEDERS & CO.
Established 1885
427 WASHINGTON STREET, NEW YORK, N. Y.

Add to the distinction and sales appeal of your perfume compositions with these new chemicals:

★

· · made in U. S. A. by

ALBERT VERLEY, INC.

★ The complete series of ALIPHATIC ALDEHYDES

Aldehyde C-8 (Octyle) 100%
Aldehyde C-9 (Nonyl) 100%
Aldehyde C-10 (Decyl) 100%
Aldehyde C-11 (Undecylenique) 100%
Aldehyde C-12 (Laurique) 100%
Aldehyde C-12 (Methylnonylacetique 100%

★ ★

AV

Formerly these fine chemicals were available only from European sources, at prices beyond the reach of the soap perfumer. Today, they are not only manufactured 100% in our Chicago laboratories, but they are actually available at practical prices — considering the small quantity that is necessary to impart individuality to soap compounds. • The perfume industry has already been advised that these products are available, and is using them with notable success. Be among the first in the soap industry to enjoy the same success.

Write for working samples and prices.

★ *Albert Verley* aromatics

ALBERT VERLEY, INC., D. A. Bennett, *President*, 1621 CARROLL AVENUE, CHICAGO, ILLINOIS
114 EAST 25th STREET, NEW YORK • MEFFORD CHEMICAL CO., LOS ANGELES

A SAMPLE SAVING WITH THE TRANSWRAP MACHINE ▼

This Boraxo sample package is produced by the Cellowrap Packing Company, Wilmington, Del.

PACIFIC COAST BORAX CO.

Saves 4/5 the cost

OF SAMPLE PACKAGES
USING THE TRANSWRAP PACKAGES
FORMED FROM PRINTED "CELLOPHANE"

CHANGE from old-style miniature can to Transwrap package for sampling saved four dollars of every five spent for sample packages! Furthermore, the Transwrap package

SAVES ON SHIPPING AND MAILING COSTS, TOO!

The Transwrap package is lighter and smaller; requires no expensive carton or packer. Not only does it save in original cost of the package, but the cost of its distribution is very substantially reduced.

ALL THESE SAVINGS TAKEN INTO ACCOUNT—

THE TRANSWRAP SAMPLE REACHES 5 POTENTIAL CUSTOMERS FOR LESS THAN THE FORMER COST OF REACHING ONE!

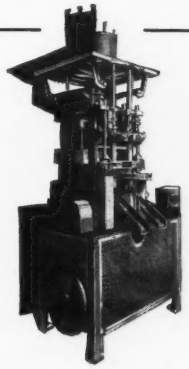
And, it does a better selling job, too . . . for, the printed wrap most effectively presents the Boraxo story in addition to the faithful reproduction of the regular package.

SIMILAR SAVINGS FOR YOU Can Be Made!

For sample packages . . . for larger quantities and sizes . . for coffee, candy, popcorn, nuts, crackers, powders, pills, tablets, granular materials and miscellaneous articles. *Ask about it; write—*

STOKES & SMITH Co
PACKAGING MACHINERY — PAPER BOX MACHINERY

4915 Summerdale Ave., Phila., U. S. A.



Folder fully describing S & S TRANSWRAP sent on request.

S&S TRANSWRAP

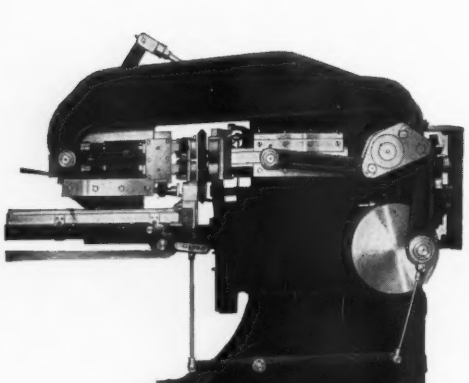
FORMS—FILLS—SEALS—60 OR MORE PER MINUTE!

Uses "Cellophane," or other heat-sealing material, from the roll . . . plain or printed. Insures a perfectly tight package, yet the serrated or notched cut-off makes it very easy and quick to open.

ALSO—FILLING & CARTON FILLING AND SEALING & TIGHT WRAPPING MACHINERY • SPEEDS TO SUIT YOUR NEEDS 15-30-60-120 PER MINUTE

SOAP PRESSES *Without*

toggle motion are obsolescent



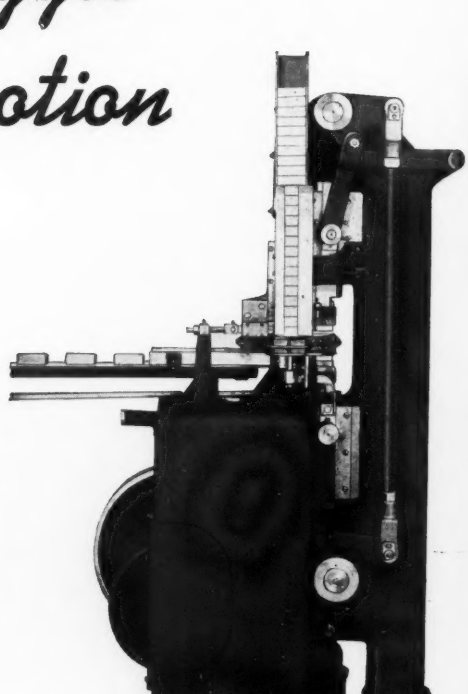
Type K Laundry Soap Press

JONES

toggle

motion

PRESSES



Type ET Toilet Soap Press

produce a more gradual pressure than any other means and prevent the cracks so frequently found in cakes stamped by a sudden blow.

Gradual Toggle Motion pressure gives soap time to adapt itself to engraving and other die recesses and brings out clear, sharp letters and designs.

Toggle Motion holds cakes under pressure longer and produces a smooth, polished finish unattainable without it.

R. A. JONES & COMPANY, Inc.

P. O. BOX 485 CINCINNATI, OHIO

The Standardized *Constant Motion Cartoner* packages, bottles, jars, tins, collapsible tubes and many other articles. It feeds, folds, and inserts direction sheets and corrugated board liners with the loads.

AS THE EDITOR SEES IT

THESE are record-breaking days for soap sales by manufacturers. Once again, the record for the largest quarter-year is shattered, according to the figures of the Association of American Soap & Glycerine Producers. The first quarter of 1941 was larger than any previous quarter on record, larger even than those record quarters of 1939, and something over thirty per cent above the normal average for a three-months period.

Whether this larger tonnage of soap is going into consumption or into storage, we do not know. However, we are inclined to believe that the per capita soap consumption of the nation has expanded materially over the past six months as it has in the past during periods of great industrial activity. Of course, large tonnages of soap are going into Army and Navy warehouses, but these are not great enough to explain the full increase. It would seem that the average consumer is using more soap,—and perhaps buying a little extra to have on hand if prices go up, upon which point most everybody apparently agrees.

COMPLAINTS from manufacturers that their men are quitting their jobs to move on to plants working on defense orders, have become quite numerous of late. In two instances, practically the entire staffs of small plants quit to go to work in a nearby armament factory where the wages are about thirty cents per hour higher than that being paid. That there is a shortage of skilled labor is obvious. There always is under conditions such as exist today. It appears to be a case of raising the ante to meet the figures of the defense plants, or getting along as best one may with such other men as are available.

In some instances, men with five and ten years experience in one job are reported moving to other plants for as little as ten per cent higher wages. To us, this appears foolhardy if we consider experiences of yesteryear. But that is for the men to decide. The fact remains that there is a considerable shifting about of labor,—not considering, of course, the large unionized industrial centers,—a mass movement, as it were, to higher wage levels. What with mounting wage scales and a shortage of labor,—and a tax situation on the horizon calculated to give a bronze image the shudders,—who wants to be a manufacturer?

SAID P & G's Richard Deupree before a recent convention of newspaper publishers: " . . . without the advertising that created broad consumption of popular brands, there would have been no profits to plow back into the business. And with no profits, there would have been no crop of developments and improvements." He was discussing advertising, specifically soap advertising. He was among other things answering the oft-made charges that large-scale advertising is uneconomic, and that it tends to create monopolies.

As to economy and monopoly, the record of the soap industry is itself the best answer. More and better soap is being supplied for the money today than ever before. The smaller and lesser known units of the indus-

try are bigger, better, stronger,—and competition throughout the industry is as keen as a razor. Monopoly? Only perhaps in the eyes of those parlor-pinks who see monopoly in any business venture that has grown beyond the size of a corner peanut stand.

But, we feel that there is one point which might well have been mentioned directly in an address on soap advertising. Has soap advertising been in the public interest? Has this high-pressure, knock-down, drag-out, keenly-competitive advertising been for or against the best interests of the common people? Emphatically, we maintain, that in spite of all that has been held against it upon occasion, ridiculous copy and absurd radio verbiage, soap advertising has been and still is in the public interest. Soap advertising, irrespective of the brand it heralds, tends to make for a cleaner people. And for a dozen good reasons, cleaner people are better people.

Considering good and bad, the balance very definitely favors the side of the public interest where soap advertising is concerned. To us, this is the strongest argument of vindication when the critics carp. And inasmuch as Mr. Deupree's address was reported in about every first-line newspaper in the nation, we wish that he had gone a step further and driven home this point so that all might hear and read.

FAILURE to advance prices in keeping with increases in raw material costs usually takes a toll in profits far greater than is suspected by the average manufacturer. Faced as we are today with advancing raw material prices all along the line, it is certainly the part of wisdom to keep a sharper eye on the relation of prices to costs than for many a moon.

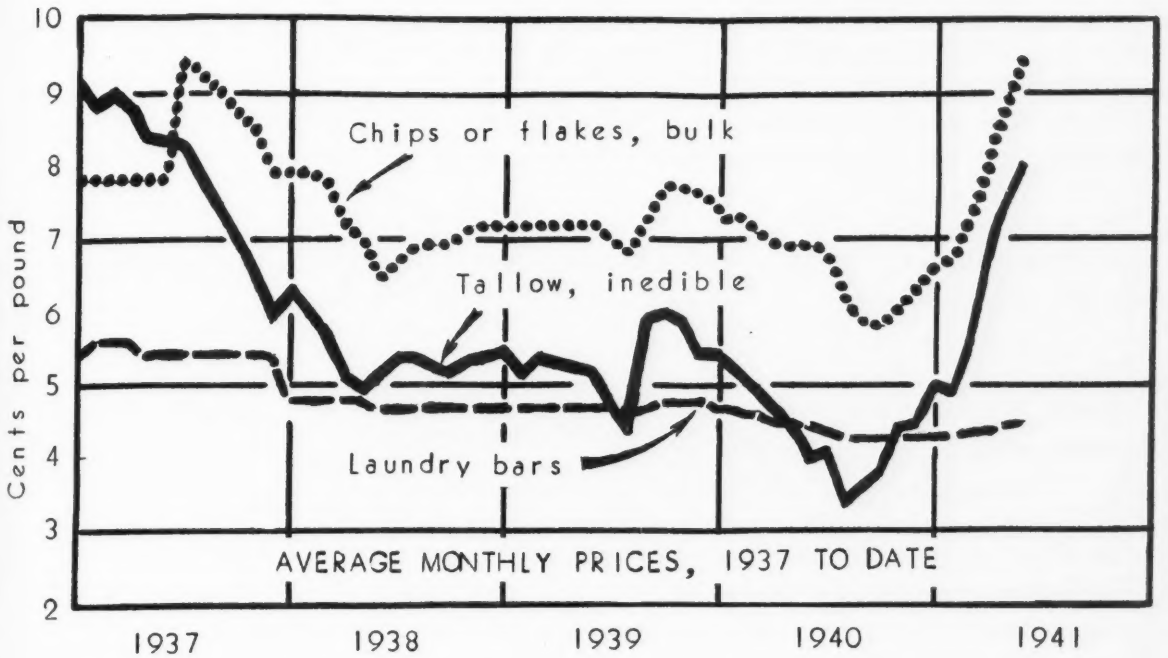
Not so long ago, a speaker before a sales convention pointed out some figures which apply to price cutting. He mentioned that a cut of five per cent in a price means a cut of twenty per cent in gross profit or an increase of twenty-five per cent in volume to return the same net profit as was previously obtained. These figures are not new and have been published before to illustrate how a small price cut may have an effect on profits all out of proportion to its size.

Whether it be a cut price or an increase in raw material costs, the same rule applies. If the ratio between costs and prices is changed slightly, gross volume must be increased five times the amount of the change or the difference comes directly out of profits. It is something to be thought about in the present situation in the raw material markets.

THIS matter of convention dates has come to be quite a problem in, around, and about the industries associated with chemical, drug, and allied products. That there are too many conventions, we quite all agree. But what to do about it? Each and every trade group or association feels that it must have at least one annual meeting,—and this list has grown and grown and grown. Every enterprising firm feels that it cannot afford to miss any of these meetings, and this is especially true among the supply houses. As a consequence, conflicts in convention dates often cause considerable confusion.

From the Drug and Chemical Section of the New York Board of Trade has come the suggestion that it will be glad to act as something of a clearing house in settling convention dates to avoid conflicts. Because of the broad scope of its work and the diversity of the interests of its membership, the Drug and Chemical Section appears to be the logical office to handle this job. In acting merely as a clearing house for convention information, so that each association in arranging dates can know what other groups have already planned, it can be of considerable help. If we must have these conventions, meetings, golf tournaments in such profusion, let's have them arranged to avoid conflict. Then eventually, those who care to do so, can spend all of their time at conventions, and visit their offices on Sundays.

SOAP PRICES
vs.
OIL and FAT COSTS



DURING the eight months since August, 1940, prices of the principal fats and oils used in the manufacture of soaps have been advanced more than 100 per cent. Indeed, in some instances, prices are now three times what they were eight months ago—and are still climbing. Soap prices on the other hand, as every soap maker knows too well, have not advanced to an extent in any way commensurate with the rising costs of raw materials. In the last three months alone, soap fat prices have advanced approximately 60 per cent, and in the same period, the peak advance in bulk soap prices has been no more than 25 per cent; wholesale prices of the branded or trademarked soaps have gone up less than 10 per cent, and retail prices, always sluggish in movement, have not yet been affected to any appreciable extent.

Prices of soaps are currently much too low, most soap makers agree, and have been too low for some time in view of the steady rise in raw material costs. On certain items, of which laundry bar soap is an example, prices are so low that many bulk soap manufacturers have entirely discontinued their sale until such time as market prices rise to a level enabling them at least to break even, even if profits in these lines may not be forthcoming for some time.

The wholesale prices of soaps naturally tend to fluctuate less widely than the prices of oils going into their manufacture, although following the broad movements of the oil prices. In the present case, the upward trend of fat prices since last September, has been so rapid that soap prices have not been able to keep pace. For an item like 88 per cent tallow chip soap, for example, the present price is approximately 1 cent a pound too low. With tallow at 8 cents a pound, laundry chip soap should be selling at a carload price closer to 10½ cents a pound, whereas it is currently quoted at 9½ cents a pound. Higher prices on bulk soaps are certainly in the offing and will become necessary as low-cost inventories become depleted. The same holds true for potash soaps. Laundry chip soap prices tend to follow the trend of tallow prices more closely than the prices of any other type of soap, yet it is generally true that all soap prices have lagged far behind the level at which they

should be, based on raw material costs. This statement is even more applicable to the wholesale prices of the advertised brands than it is to wholesale prices of general soap lines.

Wholesale prices of the advertised brands of toilet and packaged soaps had been changed essentially not at all up until April of this year. During the month of April, Procter & Gamble Co. started the ball rolling by raising wholesale prices 4 per cent on all items in their soap and shortening lines with the exception of "Ivory." Colgate-Palmolive-Peet Co. quickly followed suit with several general price advances, as did Lever Brothers. Then during the first part of May, additional wholesale price advances came thick and fast. P & G and Lever raised the prices of "Ivory" and "Swan" by 35 cents a case on the large 10 oz. size cakes and 20 cents a case on the smaller sizes. And subsequently a second similar price advance went into effect, raising the case prices to about 9 per cent above the April level. "Sweetheart" soap was advanced 30 cents a case by Manhattan Soap Co. and Lever Bros. raised "Lifebuoy" by 35 cents a case. Almost every day brought news of higher prices on the popular soap brands until practically every large soap company had reduced somewhat the gap between prices and costs of raw materials. As noted above, however, the price advances were not proportionate to higher costs of manufacture.

It is to be expected that wholesale prices of the advertised brands will be advanced further in the very near future. And in time the higher wholesale prices will have to be reflected in higher retail prices. So far, price advances have figured less than one cent a cake, or between 3/10 and 7/10 of a cent per cake, roughly. These advances will have to be passed on to the consumer, particularly if wholesale prices continue to rise—and they undoubtedly will. Soap stocks in the hands of retailers are probably at an all time high at the present time judging from figures recently released by the Association of American Soap & Glycerine Producers. Soap sales for the first quarter of 1941, as shown by Association figures, were 30.5 per cent higher than average quarterly sales for the past six years, which indicates that a fair percentage of manufacturers' deliveries for the quarter may still be on the shelves of retailers.

No accurate figures showing the size of soap stocks are available, but they are obviously large and this factor may tend to postpone any noticeable increase in retail soap prices for some time to come. Several of the large soap companies, however, are contemplating making changes in their merchandising methods to compensate for rising costs. The one-cent soap sale, for instance, if it is not replaced by some other attention-getter, may be offered at a slightly higher base price, — three cakes for 25 cents and four for 26 cents, say, instead of three for 24 and four for 25. One thing seems to be indicated with certainty: retail prices will be higher. Whether soap prices will go as high as they did back in 1920, is anybody's guess.

NO discussion of soap prices would be complete, of course, without mention of glycerin prices. It is highly pertinent to note that glycerin prices were advanced 2 cents a pound on May 21 after having remained stationary for almost three years,—at 12½ cents for the C.P. grade, in drums, and 7½ cents for soaplye, 80 per cent grade. Chemically pure glycerin is now quoted at 14½ cents a pound in carlots, drums, and 15 cents a pound for smaller lots,—a far cry from the 60 cents a pound at which C.P. glycerin was selling in May, 1916, twenty-one months after the outbreak of the World War—a time comparable to June, 1941.

One of the principal elements behind the rapid rise in the price of oils and fats during the last war was, of course, the terrifically high price of glycerin. Stocks of glycerin were small in those days and the demand for it as a primary munitions material pushed its price to five and six times the pre-war level. No such skyrocketing of glycerin prices is looked for or expected in the present upheaval. Its use will undoubtedly increase in the months ahead, but it is no longer the absolutely essential munitions material which it was back in World War No. I. Existing glycerin stocks are believed sufficient to meet all requirements for the next six months or more and the present rate of production as compared with consumption is an added assurance that the price of glycerin will remain relatively stable. Any further advances in price, if they become necessary, will be occasioned by the higher cost of oils and fats rather than by scarcity of and suddenly increased demand for the material.

As far as glycerin is concerned, the current situation bears little similarity to that which existed during the comparable period of World War I, and it differs from that era in several other important particulars. For one thing, stocks of fats and oils in the United States at that time were exceedingly low in comparison with the tremendous inventories now available. As shown by the government report of warehouse stocks of fats and oils on March 31, 1941, more soap making fatty materials were on hand on that date than at the end of any previous first quarter in the history of the United States. There can hardly be any actual shortage of soap making fats and oils when some 145,933 tons of inedible tallow, 104,970 tons of crude coconut oil, 65,200 tons of greases, 71,894 tons of palm oil, etc., etc., are on hand. Yet the fact of shipping shortages and fear of more pronounced shipping shortages in the future together with some speculative action continue to push fat and oil prices to ever higher and higher levels. It is interesting to note how closely the trend of prices is following the same general characteristics of the price curve back in 1914-15-16. It remains to be seen whether the present trend

will continue to follow that of twenty-five years ago.

To be sure, current prices of fats and oils are not high when compared with pre-depression prices; they only seem high in comparison with the low prices to which everyone had become accustomed since 1937. For many years prior to 1930, the price of tallow was consistently in the neighborhood of 7 to 10 cents a pound, it will be recalled, and prices of other fats and oils were not far from the present quotations. But soap prices were considerably higher during that period than they are today.

Recent Price Quotations on a Representative List of Soaps and Soap Fats

	Aug. 26, '40	Feb. 26, '41	May 28, '41
Tallow, extra, f.o.b., N. Y., lb.	3⅜	4⅞	7⅞
Coconut Oil, plus tax, N. Y., lb.	5¾	6½	10
Grease, yellow, lb.	2½	4⅝	7½
Olive Oil, denat., gal.	$1.50	$2.25	$4.00
Olive Foots, lb.	8⅝	10¾	14½
Palm, Sumatra, plus tax, N. Y., lb.	5¼	5¼	8½
Soap, Chip, 88% tallow, cl., lb.	6⅛	6¾	9½
Toilet Soaps, wholesale:			
Brand "A" case	$8.25	$8.25	$8.95
Brand "B" case	....	$7.85	$8.55
Brand "C" case	$5.40	$5.40	$5.70
Brand "D" case	$5.30	$5.30	$5.65
Glycerin, C.P., lb.	12½	12½	14½

While no real shortages of supplies of fats and oils exist at present, it is felt by many dealers that shortages are imminent, at least on the major imported vegetable oils. Difficulty of securing space from the Philippine Islands for copra recently led to the rumor that copra crushing plants on the Pacific Coast might be shut down. It is true that copra imports have been decreasing in volume over the past several months, but they have hardly been curtailed completely and are in fact still running above average imports for the past five years. Imports of copra for the quarter ended March 31, 1941, were 70,764 tons, as compared with 106,946 tons for the quarter ended March 31, 1940, and 85,051 tons for the quarter ended December 31, 1940.

Imports of coconut oil during the first quarter of 1941 were 40,097 tons as compared with 47,702 tons for the quarter ended March 31, 1940, and 55,396 tons for the quarter ended December 31, 1940. From these figures it can be seen that imports are far from being cut off so far, although they have been reduced. Exports of crude coconut oil from the United States were at a very high figure for the first quarter of 1941, but this strange movement took place before export control went into effect. This control incidentally was apparently set up to stop shipments of coconut oil from the American west coast to Russia, there being a definite fear that the stocks might reach Germany.

A GREAT deal of speculation has been engaged in relative to the possible effect on the American soap industry if imports of coconut oil and copra should be completely stopped through absence of shipping space in the Pacific. Such a situation is not entirely out of the realm of possibility, but it is almost purely a hypothetical question. Even if the Pacific area were to become warbound, it is not probable that any foreign power could completely disrupt shipping lanes or blockade the Philippines to such an extent that coconut oil shipments would be stopped. Working on the supposition that the time might come when coconut oil would no longer be available to American soap manufacturers, it is obvious that a substitute or substitutes would have to be found to replace coconut oil as a quick-lathering stock.

Babassu oil is probably the only quick-lathering oil which would be available in anywhere near the quantity required, and the annual production of babassu oil is only a small fraction of that of coconut oil. Production of this South American oil, could probably be expanded to some extent if the industry were sufficiently stimulated by demand from American users. This would take time, however, as the main drawback in expansion of the industry has been lack of adequate labor and transportation facilities in the interior of Brazil—a lack which cannot be quickly remedied. Imports of babassu nuts and kernels have risen strikingly in the past six years, rising from a total of 15 million pounds in 1935 to approximately 115 million pounds in 1940, or an oil equivalent of 73 million pounds. This is still a far step from the figure of roughly 400 million pounds per year of crude coconut oil required by the American soaper.

Other quick lathering oils produced from trees and plants indigenous to the Western Hemisphere have been mentioned from time to time as possible substitutes for coconut oil. There are many such oils but they all have the same defect of not being commercially available in large enough quantities to make any impression on the tremendous requirements of the American soap industry. Among those which have been suggested at various times are the oil from the coyol nut of Mexico, ouricuri oil, murumuru oil, tucum oil, ucuhuba butter, jaboty tallow, and others with varying capacities for replacing coconut oil. There always exists the possibility that industries may be gradually built up around some of these oils and that they may eventually become factors in the American market. For the present, however, arrivals continue to be irregular and stocks uncertain.

(*Turn to Page* 145)

What is CASTILE SOAP?

Recent actions of Federal Trade Commission in olive oil soap cases reopen castile controversy

WHAT is castile soap? To this question, three technical men, all with backgrounds of many years in the soap industry, gave three different answers. One stated that castile soap is any white bland soap with a minimum of free alkali, and suitable for use on delicate skins. The second stated that castile soap is essentially this, except that it should contain olive oil as its *main* fatty ingredient. The third stated simply that castile soap is a soap made wholly from olive oil.

And so, after twenty years or more of periodic controversy, opinion within the industry itself appears to be just as widely split as it ever was on this subject. Definitions of the term, castile soap, in dictionaries and in books on soap are generally meaningless here because they too are expressions of opinion. Outside of the industry, among physicians, pharmacists, and others who might have an intelligent opinion, castile soap appears to be an olive oil soap, but these views likewise are ones which have been accepted from the particular literature with which these people are most familiar. Some soapers point out that more soap branded "castile" and made from coconut oil and tallow is being sold today than all the olive oil and olive combination soaps put together, and that by force of tonnage alone, a castile soap is any white bland soap.

After years in the courts, the term, castile soap, ended up just about meaningless,—at least from the legal angle and in the opinion of some soap manufacturers. To others, castile soap has always meant and still means just one thing,—an olive oil soap. And some of these latter are not backward in stating that any other definition is a subterfuge based on legal hair-splitting to permit inferior soaps to trade on a good name and deceive the user. And thus, the controversy goes on and on and on!

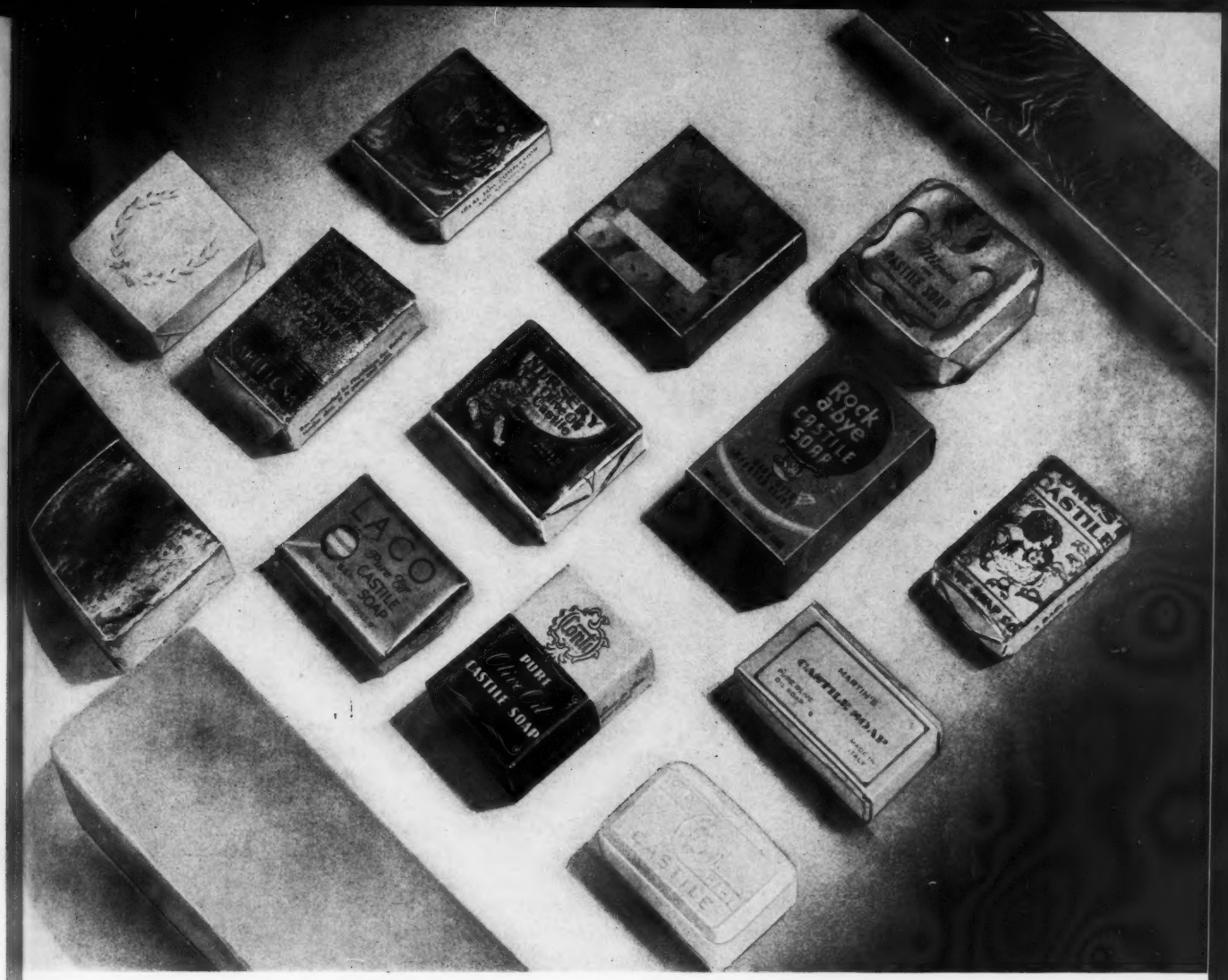
Castile soap and olive oil soaps have been brought back into the news more recently by the action of the Federal Trade Commission against Allan B. Wrisley Co. of Chicago. The Commission maintained that any soap carrying the designation "olive oil" must be made wholly from olive oil. This contention was essentially reversed in an appeal to the courts by the soap manufacturer, and soaps not made wholly of olive oil may be designated as olive oil soaps provided the nature and amount of other ingredients are also indicated, and provided they contain sufficient olive oil materially to affect the properties of the soap.

In view of the greater activities of government departments today in the supervision of trade practices, particularly in the matter of misbranding and adulteration, this Chicago case brought up again in the minds of manufacturers, distributors, and dealers, the old question of "what is castile soap." Just where does castile soap stand today? Just how far can anybody go without laying himself open to complaints by the Federal Trade Commission? Does this olive oil soap decision have any bearing on what may and may not be called "castile soap?"

The questions can best be answered, perhaps, by looking back into the records of the famous "castile soap case" which was settled in 1932 after having been debated more or less continuously for some eight years. The complete records of the proceedings in the dispute, which began with the original complaint lodged by the Federal Trade Commission against James S. Kirk & Company in 1924, are voluminous, filling thousands of pages and covering the opinions of literally thousands of witnesses. But out of all this mass of legal confusion, the principal points and decisions can be reviewed much more briefly.

In January, 1924, the FTC, in a complaint, charged James S. Kirk & Co., of Chicago, with having named, branded, labeled, advertised, and sold as castile soap some twenty brands of its soap which varied as to fatty composition from no olive oil to 90 per cent olive oil and with unknown percentages in a few cases, "with the capacity and tendency to mislead and deceive the trade and the public into the erroneous belief that said soaps are genuine castile soap." The complaint then proceeded to define "genuine" castile soaps as soaps having olive oil exclusively as their fatty ingredient.

It was also charged that the Kirk soaps were bought by the pub-



lic and trade as "genuine castile soap in preference to the necessarily more costly genuine article dealt in by its importing, manufacturing and selling competitors and long esteemed by reason of its olive oil content . . . and its qualities for infants, the sick, its use in medical preparations and other purposes, by dealers in soap, the public, the medical profession and the drug trade by whom it has long been recommended; all to the prejudice of the public and respondent's competitors."

Naturally the complaint, being of such a basic nature, excited widespread interest in the soap industry and among importers and distributors. The Federal Trade Commission encountered such active opposition from American non-100 per cent olive oil castile soap makers and equally lively support from the importers of castile soap and olive oil and the manufacturers of 100 per cent olive oil castiles that a virtual stale-mate was reached. The case dragged on through years of debate while evidence both pro and con was being accumulated.

Thousands of witnesses for each side from all parts of the country and from all walks of life were called to give testimony on the meaning and definition of "castile." The Federal Trade Commission and its supporters continued to unearth evidence upholding their viewpoint to which they adhered stubbornly. For their part they insisted that castile soap meant a soap made from olive oil and no other, and collected several hundred technical and dictionary definitions in an attempt to prove it. The historical development of the word "castile" was also argued at length and many technical authorities and non-technical "men in the street" were found to endorse the stand of the FTC.

On the other side of the fence, equally authoritative and convincing evidence was brought forward. Many soapmakers claimed that the soaps which they sold under the name of castile and which were not made of olive oil exclusively, were superior in lathering and cleansing qualities to castile soaps made only from olive oils. The properties of olive oil castile were unsatisfactory for ordinary uses, they said, and, as for the name, castile, this had become merely the

designation of a certain general type of soap irrespective of the materials from which it was made. Common usage of the term implied no knowledge of the raw materials involved in the manufacture of castile soap, they asserted, and thousands of witnesses supporting this claim gave testimony as to its truth.

Meanwhile, similar complaints were also filed against Armour & Co., Globe Soap Co., Peet Brothers Co., and Cincinnati Soap Co. But action in these cases was withheld while the Kirk case was still undecided.

In December, 1928, the FTC ordered the Kirk company to cease and desist from use of the word "castile' and the phrase "olive oil soap" to describe soap, the oil or fatty composition of which was not wholly derived from olives. Opinions of the Commissioners, however, were not unanimous. The case had not yet got into the courts, and, since no company is compelled to abide by a decision of the FTC until such time as that decision has been made effective by an order from a United States Court, castile soaps of all compositions continued to be made and sold. James S. Kirk & Co., therefore, immediately filed with the United States Circuit Court of Appeals for the Seventh District, a petition to review and set aside the cease and desist order. In July, 1930, Procter & Gamble Co. purchased the soap business and brands of Kirk & Company and it was permitted to intervene as co-petitioner.

Finally, after the case had remained on the court calendar for over three years, the United States Circuit Court of Appeals carefully reviewed the entire proceedings and reversed the order to cease and desist from use of the word "castile." Apparently strongly influencing the court's decision was a circular of the Bureau of Standards, U. S. Department of Commerce, published in 1923, which stated in part: "There are soaps made entirely from coconut oil which are sold as coconut-castiles or hard-water castiles. Many other castiles are made from a mixture of coconut oil and tallow." Consequently, and taking all evidence into consideration, it was held that the sale of soap which does not contain 100 per cent olive oil but contains oily and fatty elements other than olive oil, as "castile" soap, does not constitute unfair competition.

A review of this decision of the Court was petitioned by the ever-persistent Federal Trade Commission, but this request was refused. Since that time, broad use of the word "castile" has gone unchallenged.

WHAT is more important today in the eyes of the Federal Trade Commission is that the prefixes to the word "castile" or other words used in naming, describing or advertising a castile soap or an olive oil soap should be a true indication of the composition of the soap. As was brought out in the recently modified order of the FTC directed against Wrisley, it is perfectly permissible to use brand names containing the word "olive" to describe a soap containing olive oil combined with other oils providing it is made clear that the soap is not made wholly from olive oil and providing that the olive oil is present in an amount sufficient to affect its qualities to an appreciable extent. But,—just how much olive oil is required substantially to affect the qualities of a soap?

For example, if the fatty composition of a soap is 55 per cent tallow, 35 per cent olive oil and 10 per cent coconut oil, the soap should not be labeled "Olive Oil Castile" or "Made with pure olive oil." *The olive oil content should not be emphasized so much that the impression is given that the olive oil is present as the major constituent.* To be perfectly safe, each fatty constituent, if the fat content is mentioned at all in labeling or advertising, should be named with an emphasis commensurate with its relative quantity in the soap.

Thus the word "castile," from the legal standpoint at least, has little significance as applied to a soap. The term apparently may be applied safely to any soap regardless of its oily or fatty ingredients. A castile soap may be manufactured from almost any fatty stock or from almost any combination of fatty stocks. It may be made solely from olive oil or solely from coconut oil. It may be made from palm oil, coconut oil and olive oil in any desired proportions, or it may be made from tallow and olive oil or from peanut oil, cottonseed oil, lard oil, red oil or any other oils that suit the soap makers' requirements. There are no restrictions on the composition of a castile soap, neither are there any restrictions on the method by which it is made nor on the color and other characteristics of the finished product. Castile soap may be a cold process soap; it may be semi-boiled or it may be a fully boiled soap. While most castile soaps on the market today are uncolored and are white or cream in hue, or are mottled, some manufacturers have recently begun selling colored castile soaps.

Legally the term "castile" is almost meaningless but it still has, however, a strong connotation to the purchaser which undoubtedly is the reason that the free use of the term was fought for with such tenacity. To the ultimate purchaser, the housewife buying a cake of soap for bathing her baby or for her own complexion, etc., the fact that she asks for and receives a cake of soap labeled "castile" is supposed to be her assurance that she is getting a pure, mild soap. She is held to know little and care less what ingredients have gone into the soap, although she may assume that they are the finest of materials. She continues to purchase castile soap for certain purposes on the strength of the name without having any clear idea as to its meaning in terms of materials used.

To satisfy his own curiosity about the present general public reaction to the words "castile soap," and not being satisfied with the evidence of witnesses given in the case of the Federal Trade Commission against James S. Kirk & Co., the writer conducted a personal small scale survey of public opinion in which 100 housewives, chosen at random, were asked a series of non-leading questions designed to find out how, in their opinion, castile soaps differ from other soaps. While space does not permit of a detailed account

of all the answers of all the "witnesses," the results of the "survey" can be summarized briefly.

OUT of the hundred women interviewed, only two mentioned that castile soap was "made from olive oil." Of the rest, the majority admitted they did not know what it was made of, other than that it was "made from some oil," or frankly said, "I don't know." In describing the outstanding characteristics of castile soap, 86 of the women used one or several of the following terms:—pure, mild, mildest, does not irritate, fine, "soft" (meaning not harsh), bland, the best, about the best soap. The remaining 14 made comments of which the following are representative: "I've never used it." "It's not worth the price." "I haven't used it for a long time." "It's supposed to be mild and pure, but I don't think it's any better than a lot of other soaps." Almost 50 per cent of the women said they sometimes used castile soap for washing their own or their children's hair, while about one-third said they used it or had used it at one time for washing the baby, on the recommendation of the family doctor.

A certain amount of confusion seemed to be prevalent regarding brands, some of the women apparently not being sure whether "castile" was a trade name or whether it was a general name for a type of soap. This was brought out when several women mentioned another soap by its trade name saying they preferred it to castile soap, seemingly under the impression that castile soap was made by only one company. Some mentioned it was a hard soap and that they had bought it in long, unwrapped bars. "It doesn't lather," said one woman, "and it has a bad odor."—which objections, incidentally, were encountered only once during the course of the survey.

This survey was conducted in a typical suburban community in the East where very probably "castile" has a somewhat different connotation than it does in other parts of the country. However, if it can be assumed that the small group contacted in the poll approximates a typical cross-section of housewives, in the East at least, definite general conclusions can be drawn from the results: that a large majority of housewives look upon castile soap as a mild, non-irritating soap suitable for washing babies or for washing the hair, and that they do not connect castile soap with olive oil in their minds. Another conclusion which might be made is that in most cases women use castile soap for washing their babies because it has been recommended to them by a doctor. (Which tempts one to wonder whether the majority of doctors know that castile soap is not necessarily an olive oil soap.)

THE principal and the only really important market for hard castile soaps is through drug stores, department stores and other retail outlets to the housewife. Some castile soaps, notably so-called "hard-water castiles," in the Southern and Western parts of the United States, are sold in grocery and variety stores as well as drug stores, but on the whole, probably the largest volume is sold over the drug store counter. As soaps which are considered to be the mildest and best, as a class, castiles find their natural place in the drug store along with toiletries where they can command a higher price because of their name and reputation. In the East, most castiles are priced too high for the grocery store trade.

It has been estimated that there are between five hundred and six hundred brands of castile soap on the market today. Only a very small number of these, probably no more than two or three dozen, are 100 per cent olive oil castiles,—and when a soap is made with olive oil as the only fatty constituent, that fact is usually mentioned prominently on the package. The rest of these hundreds of brands are made from about as many formulas as there are brands. Some of them contain an appreciable percentage of olive oil, but most of them contain none at all or only such a small percentage of olive oil that the characteristics of the soap could scarcely be affected to a measurable extent.

The extremely high price of olive oil at the present time,—over 50 cents a pound for the denatured material as compared with most other soap stocks in the neighborhood of 8 to 10 cents a pound,—has undoubtedly influenced many a soap maker to cut down on the olive oil content of his castile soaps since the Mediterranean area was cut off from commerce. Since 1933, when olive oil was selling for as low as 7 cents a pound, the price has been moving in a generally upward direction until, at the present time, it is almost as costly as it has ever been. Imports of olive oil have been dropping off gradually since 1929 although the amount going into soaps remained more or less constant between 1935 and 1940, varying between 1,299,000 pounds and 1,690,000 pounds with the exception of 1937 when the figure dropped to a low of 890,000 pounds. In 1940, 1,637,000 pounds of inedible olive oil went into soaps, somewhat less than 0.1 per cent of the total quantity of fats and oils that were used in soap manufacture in that year.

Imports of castile soap into the U. S. have also been steadily decreasing during the past 15 years or so. In the years 1926-1930, average annual imports of castile soap were 3,018,000 pounds; from 1931-1935, imports averaged 2,064,000 pounds a year. For 1936, imports were 1,681,000 pounds, and for the years 1937, 1938, and 1939, imports were respectively 1,227,000 pounds, 1,038,000 pounds and 925,000 pounds. In 1940, imports dropped to the extremely low figure of approximately 380,000 pounds, and it is expected that 1941 imports will be even lower due to the tightened blockade and the scarcity of olive oil even in producing regions. Hence, competition in the United States from imported castile soaps is now virtually non-existent.

As long as the price of commercial olive oil remains at its present high level or even while it is priced higher than $1.00 a gallon, its use in the manufacture of soaps will probably be greatly restricted irrespective of other factors.

The Vogue In PINE

STANDING at the top of the ladder of popularity today are pine-scented bath products of all descriptions. A quick trip through any drug or department store confirms this fact. "The fastest selling soap we have"; "One of the most popular types of soaps"; "Sorry, we're all sold out; we just can't seem to keep it in stock." These are some of the remarks applied to pine-scented soaps heard over the counters in a recent survey of retail soap outlets.

Pine odors as a class, and by this is meant pine-needle odors or any reasonably accurate facsimile thereof, have been steadily finding greater consumer acceptance for the past six or seven years, it appears. And this year, more brands of soap are being scented with the "refreshing, cooling" odor of pine, and more pine "perfumes," according to suppliers of essential oils and aromatics, are going into soaps than ever before in history.

Take a look at the products here illustrated,—five years ago, for example, it would have been well nigh impossible to gather together even half the pine-scented soap brands pictured,—and these represent only a fraction of all the soaps with a piney odor now being offered on the market, to say nothing of allied products. Not only among soaps alone is the upward trend in the popularity of pine apparent. Bath oils, bath salts and crystals, bubble bath products, water softeners, men's toiletries, and so forth carrying pine odors, are also joining in the general swing and are finding a higher customer preference than ever.

In the past, there have been vogues or fads in various other scents. Narcissus, rose geranium, lilac, gardenia, violet and others have captured the public fancy and pocketbook from time to time and sales of products carrying those odors have soared on the wave of popular demand for longer or shorter periods of time. Now pine odors are among the foremost classes of aromatic materials. Things have come a long ways since the days when Billy B. Van brought out his much publicized "Pine Tree Soap" made from "nothing but pine oil."

Now that summer has come again, everything is going pine,—figuratively speaking, — for in the good old summertime especially, pine seems to have a greater appeal than at other seasons. To summarize the opinions, and almost unanimous opinions at that, of a number of disinterested observers, the odor of pine-needles in hot weather conjures up in the imagination of the user a mental picture of the coolth of tall Maine woods, and refreshes one through a process of suggestion. It is agreed that pine is refreshing to most people. Delving a little deeper into the subject, many medical authorities have arrived at the conclusion that pine odors, or at least certain constituents of pine odors, have a physiological as well as a psychological effect on people. This has not, perhaps, been investigated as thoroughly

as it might be, but pine seems to have a definite "buoying-up" effect. Research on this point would undoubtedly be illuminating and might possibly open up wider advertising approaches to the merchandising of pine-scented products.

It is a fact, however, that pine has been used and is being used as an accessory to the treatment of nervous disorders in certain European hospitals,—and some of the pine formulations now being used for scenting American soaps are said to be derived from formulae of specialists who have used them abroad with encouraging results on their patients.

Perhaps this physiological-psychological effect has been a factor in the growth of the importance of pine as a scent for soaps and toiletries. Another factor of note is the present-day accent on things American which is sweeping the United States. A great part of the American buying public, if the public thinks about origins at all, identifies pine as a domestic product. The pine tree is a typically American tree in the minds of many people and *ergo* so is the nostalgic fragrance of the tree which emanates from a bar of soap, whether it sells for 5 cents a cake or three cakes for a dollar. Pine is naturally associated with the New England States: and though the particular odor used may originate in Siberia or Switzerland, it will be the pine forests of Maine that will appear as a mental image in the mind of the American buyer of a pine-scented product.

It is contended by some merchandising experts that the odor of pine has a greater appeal for men than for women. On the surface, this appears to be a logical assumption since pine does not have the sweet "perfumery" odor to which so many men theoretically object. It does seem, however, that while pine is almost universally liked by men, women too are discovering its refreshing attraction in bath soaps and bath oils particularly. As the saleslady at the soap counter of one of the largest department stores in the country expressed it: "I think most women like pine soap once they've tried it. The 'frivolous' types of women generally don't care for it so much though; they like floral odors better." In her opinion, and it was characteristic, more women are buying pine soap for themselves than formerly, having "been educated to like it through buying it for the male members of their families."

A sidelight on the preference that men have for perfumes and pleasing scents in their toiletries was brought out in a recent test conducted by a large soap company. A hundred or so men were first asked whether they liked perfumed or scented shaving cream, and practically all answered in the negative. But when they were asked to select which of two shaving creams they preferred in a "blindfold" test, one cream being unscented and the other faintly perfumed but not blatantly so, about 92 per cent chose the scented one. This test showed only that the par-

ticular perfume used was generally acceptable to men in the proportions used and in that particular shaving cream. It does not show that the same perfume in larger percentages or in another shaving cream would be acceptable. Nor does it show that a shaving cream perfumed with another scent (which one was actually used was not revealed) would be preferred to the unscented cream. Broadly speaking, however, the findings indicate that skillfully compounded perfumed toiletries can be sold to men who will not admit they like perfumes. It is even more reasonable to assume that pine scented toiletries will continue to find favor among men since pine is not put into the same class with the other less masculine perfumes.

THERE are pine odors *and* pine odors, of course, and it would be stretching a point too far to attempt to generalize about pine odors as a whole. The composition of a pine odor depends strictly on the individual compounder and every soap manufacturer in the country uses a different formula for scenting his pine soaps. To the sensitive nose of a perfume chemist, two so-called pine odors may differ as widely as a couple of cancelled stamps to a stamp collector. Some are disguised and all but hidden by strong "sweetening agents" such as labdanum, sandalwood, lavender, ionones, etc., etc., while others smell so rawly of pine that they are harsh,—all very well in their place but not apppropriate in as personal an item as a cake of toilet soap.

It cannot be emphasized too strongly that the success of a soap perfume depends as much on the soap stock as on the perfume itself. The most perfectly compounded perfume ever made will lose much of its appeal if blended into an inferior soap stock. This is as true of pine formulations as it is of other soap perfumes.

The principal natural oils used in making up pine odors are imported from Russia and from Central Europe and Sweden, although these latter imports have been effectively curtailed by the war. *Abies siberica*, or Siberian pine-needle oil as it is more commonly called, is the most important essential oil from the standpoint of volume used in the perfuming of pine soaps. Imports of pine-needle oil have been rising steadily for the past five years: in 1937 imports to the United States were 61,270 pounds; in 1938, 65,894 pounds; in 1939, 116,734 pounds; and in 1940, approximately 160,000 pounds. Not all the imported Siberian pine-needle oil goes into soaps and allied products, of course, but a large percentage does.

Most of the so-called Siberian 'pine' oil is produced in the Northeastern part of Russia where the extremely low cost of labor in terms of American dollars enables the oil to be sent to the United States at a much lower price than a similar oil produced in the United States would cost. The main odoriferous constituent of *Abies siberica* is bornyl acetate which makes up from about 29 per cent to 43 per cent of the oil. Also present are pinene, camphene, phellandrene and other lesser constituents which more or less affect the odor properties of the oil. Certain of the constituents are derived from other parts of the pine tree than the needles,—branches, twigs, cones, etc., are permitted to get into the stills prior to the distillation of the needles and these impart a woody or resinous undertone to the commercial oil.

Up to the present time, imports of Siberian pine-needle oil have been reaching the United States fairly undisturbed by the European war and the price has been affected only slightly in comparison with many other imported essential oils. The present price, in the neighborhood of $1.35 a pound, is only about 25 cents above the pre-war price. This is no guarantee that the price will remain at that level. Too many things could happen to curtail imports of pine-needle oil, making it necessary for American manufacturers to turn to domestic products for all their pine requirements.

Imports of the Tyrolean 'pine' oils have been cut off almost completely by conditions abroad and accordingly their prices have advanced sharply. The most prominent of the Tyrolean products is the needle oil of *Pinus sylvestris*. This tree is widely distributed in Europe but most of the oil is produced in the alpine regions of Germany, Switzerland and Italy, whence, before the war, came most of the imports of that oil. *Pinus sylvestris*, currently priced at $3.25 a pound, is very different from the Siberian pine-needle oil in that it contains only a small percentage of bornyl acetate (about 3 per cent) and has a sweeter, more delicate odor. It also commonly contains laevo-*a*-pinene, dipentene, and sylvestrene.

In the same general class with *pinus sylvestris*, are the oils *abies alba*, *abies pectonater*, *pinus pumilionis*, templin oil and some others, which are all produced in the same general Tyrolean region. From the point of view of the perfume chemist these oils are superior in aromatic properties to *abies siberica* and may be described as having a greater appeal to women, being sweeter in character. Comparatively small amounts of the Tyrolean oils are used in soap making because of their higher price and, at the present time of course, because they are practically unobtainable due to the war.

DOMESTIC production of the various natural pine oils has not yet been developed to the extent that they are a factor in the American market, although it has been estimated that some 50,000 pounds of spruce oils and fir oils are being produced annually in the New England States. These oils resemble Siberian pine-needle oil in odor characteristics. They are produced on a "grub-stake" plan by the individual efforts of lumbermen who work in the distillation of the pine-, fir-, or balsam-needles as a side-line to their ordinary operations. The collected yields of the various lumbermen in the group are then sent jointly to market. The present drawback to domestic production of pine-needle oil, etc., is the high cost of labor which makes necessary a selling price of about twice that of the imported competitive product. Perhaps in time

the manufacturing costs of the domestic product will be reduced enough to make possible a more economical ratio with Siberian 'pine' oil, or the imported oil may become so scarce as to make the domestic product more in demand.

Most important of the domestically produced 'pine' oils as far as its use by the soap industry is concerned is a synthetic product, iso-bornyl acetate. Purely an American product, iso-bornyl acetate has been used in ever-increasing amounts by the soap industry since it was put on the market about seven years ago. Its introduction is believed by some to have been partially responsible for the present wide popularity of pine odors. It is low in price in comparison with the natural oils and available in practically unlimited quantities since it is made from the native Southern slash pine on a commercial scale. Today it is made from a by-product from the manufacture of synthetic camphor although its manufacture does not necessarily depend on the production of synthetic camphor. In the laboratory, it can be prepared through interreaction of camphene with glacial acetic acid and a small amount of 50 per cent sulfuric acid. After heating for about four hours with continual agitation the iso-bornyl acetate separates as an oily mass.

When it was first introduced, iso-bornyl acetate was not generally accepted by soap manufacturers as a substitute for the natural pine oils but it has since grown in importance until it rivals Siberian pine-needle oil as a principal constituent of pine odors. The reason is obvious. It is a product of high purity and uniformity with good properties as a soap scent and, being made from American raw materials, is not likely to be subject to price fluctuations. In fact, the price has remained at the same level for the past four years, and the price has never been advanced. Moreover, deodorizing properties have been attributed to it which make it particularly useful in bath items and, incidentally, as a cover odor for rubber products such as rug cushions for broadloom carpets, etc. All the above-mentioned factors taken together make iso-bornyl acetate a 'natural' as an odor constituent for soap products.

Naturally, none of the principal 'pine' odors are used by themselves as soap scents. The various pine odors are blended, fixatives are added along with various aromatic products such as coumarin, terpineol, lavender, isoborneol, camphene, benzyl acetate, etc., to eliminate the somewhat harsh odor the pines possess when used alone, or to impart desirable undertones. Camphene, for example, lends a resinous undertone to the scent and is added to increase the illusion of the fragrance of pine forests.

Altogether, pine fits in very well with the present-day trend toward old-fashioned odors and is likely to find even increased popularity in the future. More than a vogue or a passing fancy, pine odors seem to have come to stay as an appropriate part of the American scene.

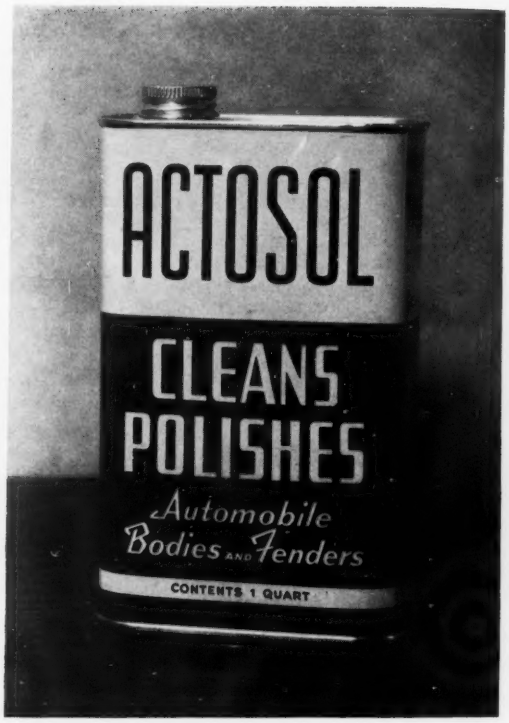
◆

Selected grades of china clay exert a colloidal detergent effect by their adsorptive power of removing grease and dirt. Experiments have shown that the amount of colloidal kaolin-soap required to convert a given quantity of water completely into lather is only about 3/5 of that required when using soap alone. Kaolin does not produce lather by itself. Geo. S. Collingridge. *Chem. Age* **44,** 163 (1941).

Books of fiction, self-help books and children's classics are currently being advertised on the cartons of products of White King Soap Co., Butte, Montana, as a new idea in merchandising. Users of White King products, by sending in box tops to the White King Book Club, can get some 57 books for from 20 cents to 70 cents each which were published in original editions at from $1.50 to $2.00. Cartons have all been redesigned to promote the book "premium" campaign. Display below is in a leading Los Angeles super market. Regular White King display (as before book deal) is shown at extreme left.

New Products and

Savogran Co., Boston, is using a counter display to merchandise its new "Coldfoam," cold water detergent for washing cars, painted surfaces, walls, floors, and general cleaning purposes. Figure of eskimo on can emphasizes cold water solubility claim.



"Actosol," new auto cleaner-polish of Actosol Co., Stoneville, N. C., is now being marketed under a distributor plan. Quart can, said to be sufficient for three to four treatments, retails at $1.00.

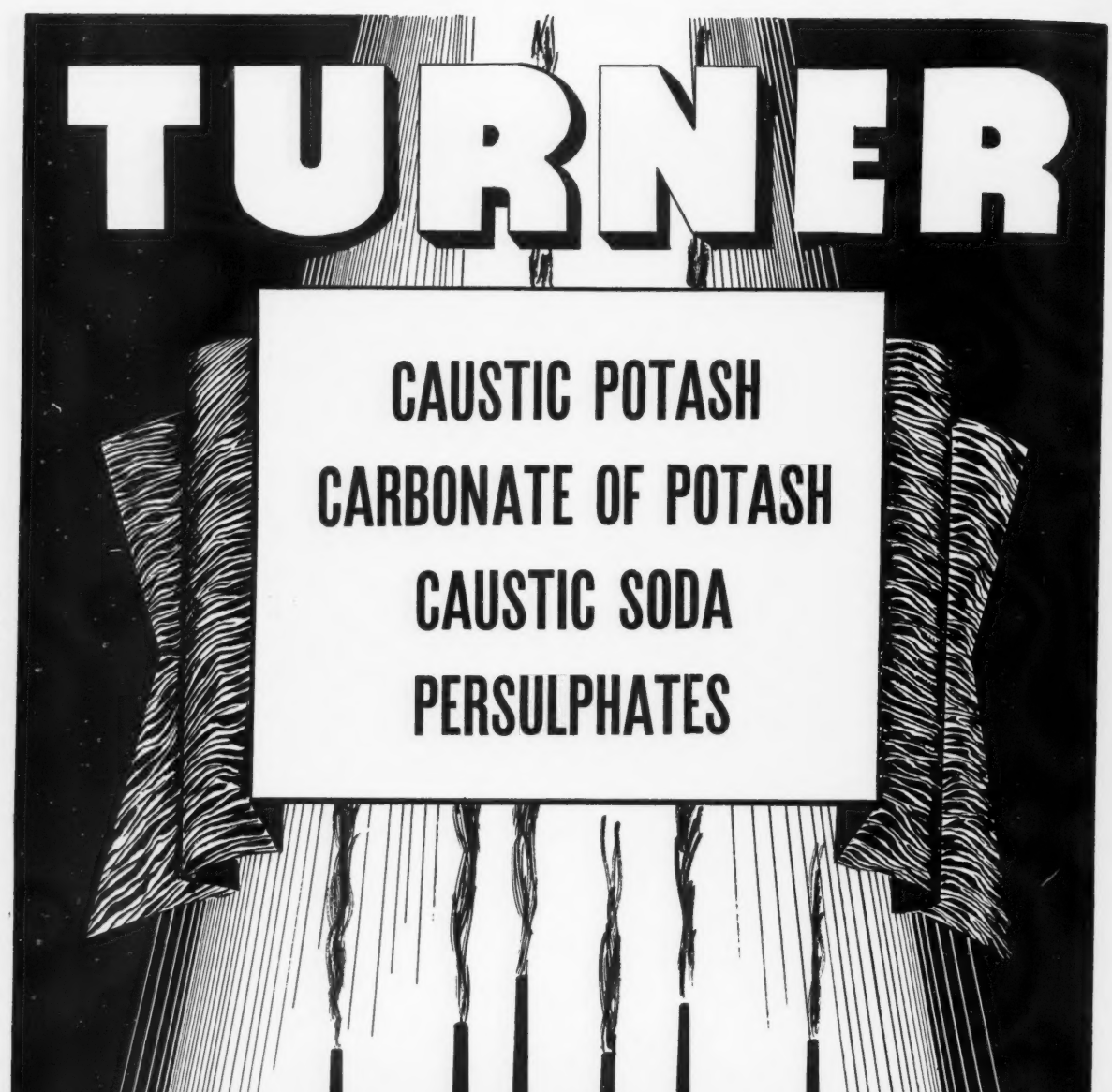
Two large tablets of Yardley's lavender soap for the bath, three tablets for face and hands, and two guest-size cakes are incorporated in the new "Soap Chest" of Yardley & Co., New York, which is sold retail at $2.35.

Packages

"Shinola" Leather and Saddle Soap, has just been brought out by the Shoe Polish division of Hecker Products Corp. The tin sells for 10 cents.

New line of cleaners and polishes of Tidy House Products Co., Des Moines, are sealed with Armstrong closures. Brown "Artmold" caps are used on the two polish packages while Armstrong's "White Metal" caps seal the cleaner.

"SparX," attractively packaged in metal containers, is the newest addition to the Candy & Co., Chicago, line of self polishing floor waxes. It is to be sold through jobbers (private label).



JOSEPH TURNER & COMPANY

RIDGEFIELD, NEW JERSEY

83 Exchange Place, Providence

40th St. and Calumet Ave., Chicago

NEWS....

Stephenson Leaves C-P-P

J. H. R. Stephenson, formerly buyer of essential oils, aromatic chemicals and other materials for

J. H. R. STEPHENSON

Colgate-Palmolive-Peet Co., Jersey City, and connected with the company over a period of almost twenty years, has just joined the executive staff of Aromatic Products, Inc., New York. He will take charge of buying at Aromatic Products and will also act as a contact man between the plant and the sales department. Mr. Stephenson is well known among suppliers of soap making raw materials as well as in the soap trade. He joined Colgate & Co. in 1922 as an office boy and his entire business career has been with the Colgate organization. He took up his new duties May 15.

Daller With Poland Soap

Adrian O. Daller joined the Poland Soap Works, Anniston, Ala., on May 15 as plant superintendent. Carter D. Poland, Jr., son of the owner of the company, has been superintendent for the past two years, but will soon start his period of military service with the Army. Mr. Daller has been engaged in consulting work over the past five years, including the development of several patents. Prior to that time, he was for many years with the Lever Bros. Company at Cambridge, Mass.

FTC Reports on Ten Soap Firms

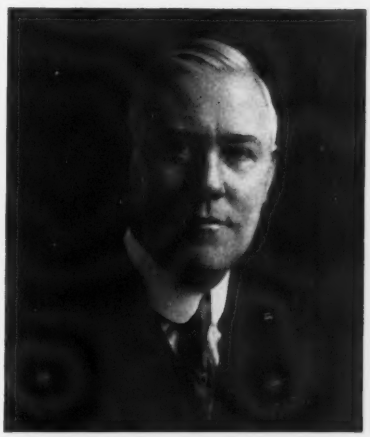
Ten unnamed corporations manufacturing soap, cottonseed products and cooking fats, the subject of a report recently issued by the Federal Trade Commission as part of its survey of principal industries in the United States, reported consolidated sales for the year 1939 aggregating $458,567,504, or approximately 70 per cent of the combined total value of products reported by the Bureau of the Census for the three products. Of the ten corporations, five specializing in the manufacture of soap had a combined income equal to a rate of return of 18.1 per cent on the average corporate net worth investment. As shown by the combined income and expense statement of the ten corporations, net profit from manufacturing and trading amounted to 10.5 cents per dollar of sales. Direct cost of materials was shown as 45 cents per dollar of sales, while advertising expenses were put at 12.3 per cent of the sales dollar.

BIMS Golf Winners

A record-breaking group of 147 members and guests turned out for the first 1941 golf tournament of the BIMS of New York, held at the Forest Hills Field Club, at Bloomfield, N. J., May 15. The next meeting, according to chairman Martin F. Schultes, Hewitt Soap Co., will be at White Beeches Golf & Country Club, at Haworth, N. J., June 26.

Hecker Ex-Chairman Dies

George K. Morrow, former chairman of the board of directors of Hecker Products Corp., New York,



GEORGE K. MORROW

died May 17 at New York Hospital. He was sixty-seven years of age. A native of Alliston, Ontario, he became widely known in the United States as a reorganizer of ailing busines firms which he would take over and put on a paying basis. Mr. Morrow had already retired from business when he reorganized American Cotton Co. He became president of that company and of its successor, Gold Dust Corp., in 1929. In 1936 the name of the company was changed to Hecker Products Corp., of which Mr. Morrow continued as president and chairman until May, 1940. At the time of his death, he was a director of Hecker Products Corp., United Stores Corp., Remington-Rand, Inc., and McLellan Stores Co.

Krautter's Labs. Lease Space

Dr. Krautter's Laboratories, Inc., has just leased the second floor of a building at 154 Wright Street, Newark, N. J., for manufacture of a new "non-alkaline soap product."

Soaps at Hospital Conference

Hospital laundry managers who attended the 12th annual Tri-State Hospital Assembly in Chicago, May 7 to 9, devoted considerable time to study of soaps and sanitary chemicals for hospital use. At one round table conference topics for discussion included "The Value of a Water Softener," and "The Purpose of Detergents." Next day the laundry managers resumed their investigations in an "Information Please" quiz session where questions about soaps and detergents were raised for answer by a board of experts. The three-day conference, sponsored by 28 professional societies drew 4,000 executives from 7,000 hospitals in Illinois, Indiana, Michigan and Wisconsin.

Eight manufacturers of sanitary products and equipment for hospital use occupied booths in the convention trade show. Arrow Laboratories, Chicago, showed surgical soaps, cresol compounds, jelly soaps and scrub soaps for the hospital trade. K. W. Ruhling and J. P. Sterling in charge. Sterne & Maley Co., Chicago, showed Procter & Gamble soaps, Solvay alkali, Calgon detergent and other supplies for the hospital laundry. Alexander B. Maley, company secretary, was in charge.

Midland Chemical Laboratories, Inc., Dubuque, Ia., exhibited surgical soaps, baby soaps, synthetic liquid floor cleaner, soap and alcohol dispensers operated by hydraulic foot pedals. Leo S. Jacobi, Chicago district manager, in charge. Vestal Chemical Laboratories, Inc., St. Louis, exhibited surgical soaps and dispensers, floor polish and a noiseless floor scrubbing machine. F. C. Freemeier, sales manager, supervised the display.

J. B. Ford Sales Co., Wyandotte, Mich., with J. L. Sullivan of the Chicago sales office in charge, presented "Wyandotte" detergents for hospital use. Huntington Laboratories, Inc., Huntington, Ind., showed their general line of sanitary chemicals under the direction of M. W. Leverneer of the company's hospital department. Also displayed was a hospital-type floor cleaning machine and soap dispensers operated by hydraulic foot pedals. Refinite Corp., Omaha, displayed water softeners and their complete line of water softening equipment for institutional use. Carman & Co., Chicago, showed antiseptic sours, wet cleaning soaps and "Erustocide" moth proofing compound. C. R. Conley, sales manager, supervised the display.

Allderige Joins Shulton

Jack Allderige, long known in the retail toilet goods field, has just joined Shulton, Inc., New York, as special representative of the company. He will work with the department store accounts throughout the country.

Lever Supervisor Dies

John E. Bernhard, 61, general sales supervisor for Lever Brothers, Inc., Cambridge, Mass., died last month at Syracuse, N. Y., at the home of a son.

Nopco Appoints Faux

George H. Faux, who has been in charge of the credit department of National Oil Products Co., Harrison, N. J., for the past 14 years, has just been appointed assistant secretary of the company. In his new capacity, which is a newly-created post in the firm, Mr. Faux will serve directly under Albert A. Vetter, secretary.

Offers African Representation

Representation in Africa, from the Cape to Belgian Congo, is offered to American firms by Lionel H. Tonkin, distributing agent. Details can be obtained by addressing inquiries c/o Barclay's Bank, Salisbury, Southern Rhodesia.

Appoint Cunningham Dept. Mgr.

Dr. G. L. Cunningham was recently appointed manager of the technical service department of Columbia Chemical Division, Pittsburgh Plate Glass Co., Pittsburgh. Dr. Cunningham joined the company last year after having served as a research chemist at Mathieson Alkali Works since 1930.

Koster Keunan to Make Soap

Naphthenic soap, ozokerite wax and naphthenic acid will be produced by a newly organized company known as Koster Keunan Wax & Oil Products Co., Sayville, L. I., according to H. W. Kraaz, vice-president and general sales manager of the company who recently resigned from Kuhne Libby Co., New York, where he had been in charge of that company's wax and naphthenic soap department. The new company will specialize in the manufacture of a line of American ozokerite wax, using a process developed by one of its research workers, it is said. Frans Koster is president of the new company which is a subsidiary of Koster Keunan, Inc., for many years a factor in the beeswax market.

Reviews P & G Advertising

Procter & Gamble Company's advertising campaigns and the development of the company's advertising since 1838 are discussed in the May issue of the *Advertiser*. P & G's first advertisement, an eleven line notice in the Cincinnati *Daily Gazette* is reproduced along side one of the company's current full page displays which represents only a small part of the $20,000,000 annual outlay for advertising today. Of this, it is brought out, P & G spends over $10,000,000 for radio, including talent costs, and $4,000,000 in newspapers, while the balance goes into magazines, printed matter, displays, store ads, premiums and premium aids, sampling, etc.

Noted Research Chemist Dies

Dr. Arthur C. Langmuir, research and consulting chemist, died last month at the age of sixty-nine at his home at Hastings-on-Hudson, N. Y. An elder brother of Dr. Irving Langmuir, famous physicist and chemist with General Electric Co., Dr. Langmuir specialized in the chemistry of shellac and glycerin and had a large part in the setting up of international standards and tests for these materials. He was a former chairman of the American Chemical Society and established the society's Langmuir award.

New Mathieson Cleaner

"Super-Mafos," a new cleaning compound in briquet form for use in dishwashing machines, has just been put on the market by Mathieson Alkali Works, Inc., New York. The product made its debut at an introductory demonstration at the Hotel New Yorker on May 15. Said to consist of a combination of six detergents which are effective on the several types of food residues, together with tetrasodium pyrophosphate, the compound is described as entirely new in composition and in action. The constituents are subjected to a "low-temperature fusion process" and, after agitation in their liquid state, are molded into hard briquets. By using these briquets in connection with an automatic feeding device, also a Mathieson development, the strength of the wash water is automatically maintained at the proper point at all times, according to R. C. Strong of Mathieson, and thus the wash water is prevented from becoming too weak to remove the bacteria-laden food residues from dishes, glasses and silverware. A new departure of "Super-Mafos" is the inclusion of a water softener so that it can be used with equal effectiveness in soft or hard water.

J. D. MacMahon of Mathieson research department checks feeding device for new dishwashing compound developed under his direction.

Armour Adding Warehouse

Armour & Company are erecting a warehouse at their Chicago stockyards plant for storage of stocks of their newly developed line of "Neo-fats." The expansion represents an investment of $50,000, it was stated.

Exhibit at Laundry Clinic

Numerous manufacturers of soaps and sanitary chemicals were among the exhibitors at the New York Clinic of the Laundry and Cleaners Allied Trades Association which was held May 9-10-11 at Grand Central Palace, New York. Exhibitors included: Armour & Co., Chicago; Colgate - Palmolive - Peet Co., Jersey City; Carman & Co., New York; Cowles Detergent Co., Cleveland; Davies-Young Soap Co., Dayton; H. Kohnstam & Co., New York; American Disinfecting Co., Sedalia, Mo.; Diamond Alkali Co., Painesville, Ohio; Solvay Sales Corp., New York; J. B. Ford Sales Co., Wyandotte, Mich.; Mathieson Alkali Works, Niagara Falls, N. Y.; Swift & Co., Chicago; Oakite Products Co., New York; Warner Chemical Co., New York; Procter & Gamble Co., Cincinnati; John T. Stanley Co., New York.

P & G Casserole Premium

Procter & Gamble Co., offered Chicago housewives an eight-piece casserole set of heat-resisting oven glassware for 150 "American Family" soap wrappers or for forty wrappers and forty cents last month. Large newspaper space was also used to call attention to other premiums obtainable with American Family wrappers.

N.O.P. Net Income Higher

National Oil Products Co., Harrison, N. J., recently reported net profit of $203,628, or 94 cents a share, for the quarter ended March 31, 1941; for the like 1940 quarter, profit was $157.703, or 88 cents a share.

Swift P. A. Dies

William E. Rowe, for a number of years in charge of purchases for the soap department of Swift & Co., Chicago, died recently at the age of fifty-five years. He had been with the company for forty-two years.

Babbitt Offers Can Holder

B. T. Babbitt, Inc., New York, is currently offering a plastic shaker-top can holder for use with their "Bab-O" kitchen scouring powder. The holder has a non-skid rubber base, comes in four colors and is obtainable for 25 cents from grocers handling Bab-O.

Beauty Counselors in 10th Year

Beauty Counselors, Inc., Detroit, toiletries, recently celebrated the tenth anniversary of the organization of the company with a banquet in the Esquire Room of the Book Cadillac Hotel.

Continental Can Director Dies

Oscar Caperton Huffman, a director and former president of Continental Can Co., New York, died May 5 at the Savoy-Plaza Hotel, New York, after an illness of three weeks. He was sixty-four years old.

WIDEN YOUR SILICATE GRADE RANGE.

From $3Na_2O, 2SiO_2$ to $Na_2O, 3.9SiO_2$, you'll find over 30 sodium silicates in the PQ line. "N" Brand, the original soap makers' silicate, still faithfully serves the industry. But more soap and detergent manufacturers are investigating the efficiency of other grades with special properties, as well as the higher alkali ratio brands, such as "K", "U" and "C". If you plan a new detergent, or a change in a present brand, let us discuss the appropriate PQ silicate. Have you a copy of Bulletin No. 170—The Role of Silica in Soluble Silica Cleansers? Free on request.

PHILADELPHIA QUARTZ CO., *Philadelphia*

ESTABLISHED 1831 • *General Offices and Laboratory: 121 S. Third St.*

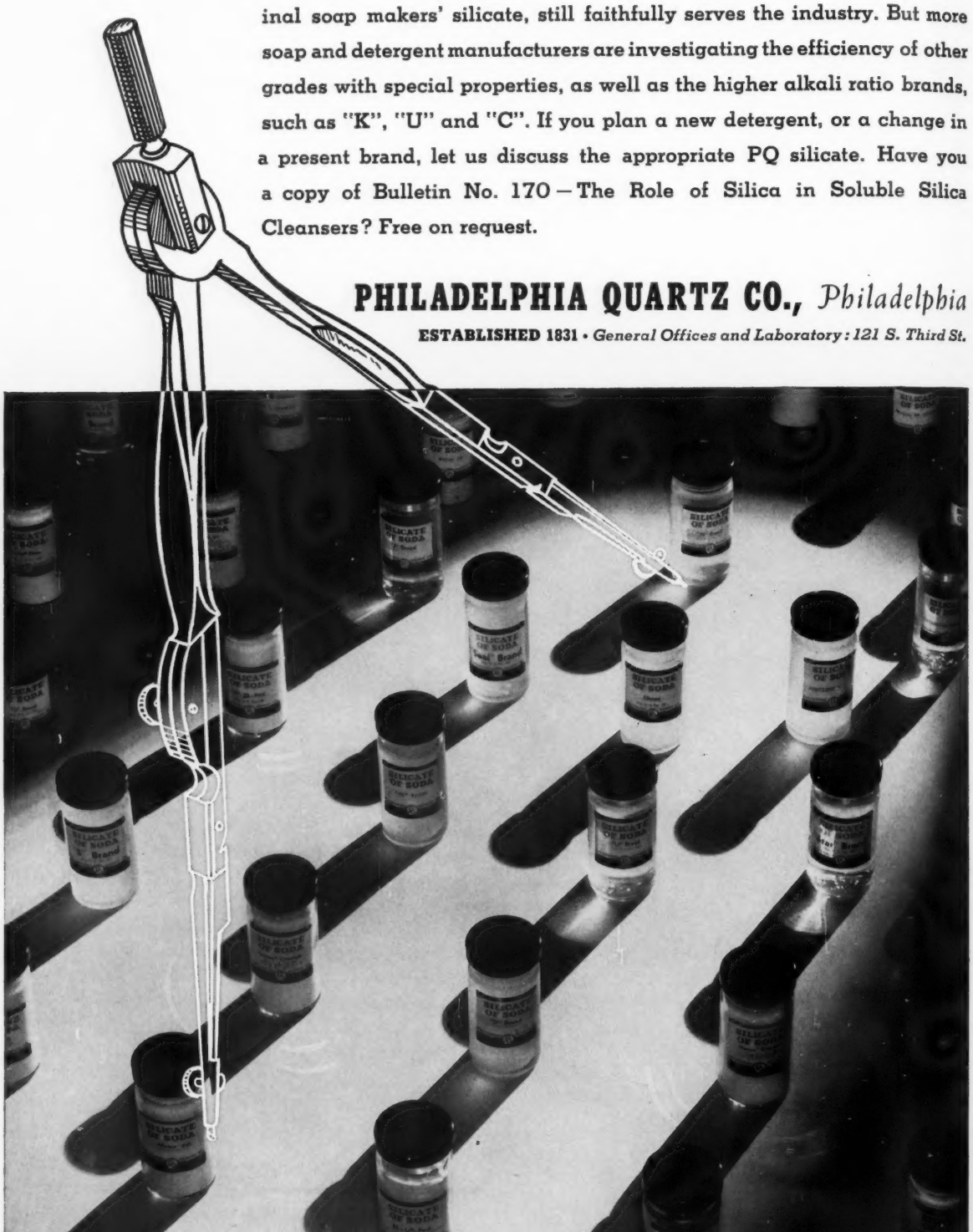


Exhibit at Safety Conference

OCCUPATIONAL dermatitis was among the topics discussed at the 19th annual Midwest Safety Conference in Chicago, May 6 to 8. In a sectional meeting on "Industrial Hygiene," Dr. Cleveland J. White, Chicago physician, presented a paper on occurrence and means for preventing the trouble in industrial plants. Educational displays and literature on dermatitis were also provided by the U. S. Department of Labor and the Illinois state labor department. Numerous manufacturers of soaps and sanitary chemicals also stressed the part their products play in control of dermatitis as part of their displays in the conference trade show.

U. S. Sanitary Specialties Corp., New York and Chicago, participated for the first time in the exposition with a display of disinfectants, foot bath solutions, floor waxes, aerzonators, lotion dispensers and other products. Prominence was given their "Clenopine" preparation. Photomurals used as a background decoration of the booth showed typical installations of the company's equipment in industrial plants. John H. Clark, Chicago sales manager, was in charge, assisted by A. H. Reinstein.

West Disinfecting Co., New York and Chicago, stressed plant sanitation with special emphasis on their "Lano-Kleen" for dermatitis control and "Shower-San" for athlete's foot. Other products shown included liquid soaps, disinfectants, insecticides, floor finishing products, paper towels, deodorizers, etc. P. O. Snider, special Chicago representative, directed the presentation.

G. H. Packwood Mfg. Co., St. Louis, emphasized their granulated soap for industrial use and also their newly redesigned soap dispenser with improved adjustable control. H. J. Hoffman, Chicago district manager, pointed out that the dispenser is now made of a plastic substance as a substitute for metal formerly used and now difficult to secure. Among the literature passed out to visitors by Mr. Hoffman and his assistant, H. B. McInnes, was a new 20-page booklet entitled "Safety Ends at pH 10," which, in easily understood terms, explains the relation of acidity and alkalinity to the effective action of soap.

Great Stuff Products Corp., West New York, N. J., passed out samples of "Derma-Cote" protective hand cream and "Vitamized" powdered hand soaps and other cleaning compounds. Company representatives included E. J. Sella, New York; C. W. Lee, Minneapolis; and John D. Robnett, Chicago. Also present at their exhibit was H. J. Nichols, president of Sunlight Chemical Co., Minneapolis, inventor of a device which utilizes ultra violet light for fortifying powdered castile soap with 17,000 units of Vitamin D, the product which Great Stuff Corporation distributes.

Lightfoot, Schultz Co., New York, had an attractively designed booth in which their powdered soaps for office and industrial use were displayed along with suitable dispensers for the product. Samples were liberally distributed by W. E. Pemberton, Chicago district manager, and his assistants.

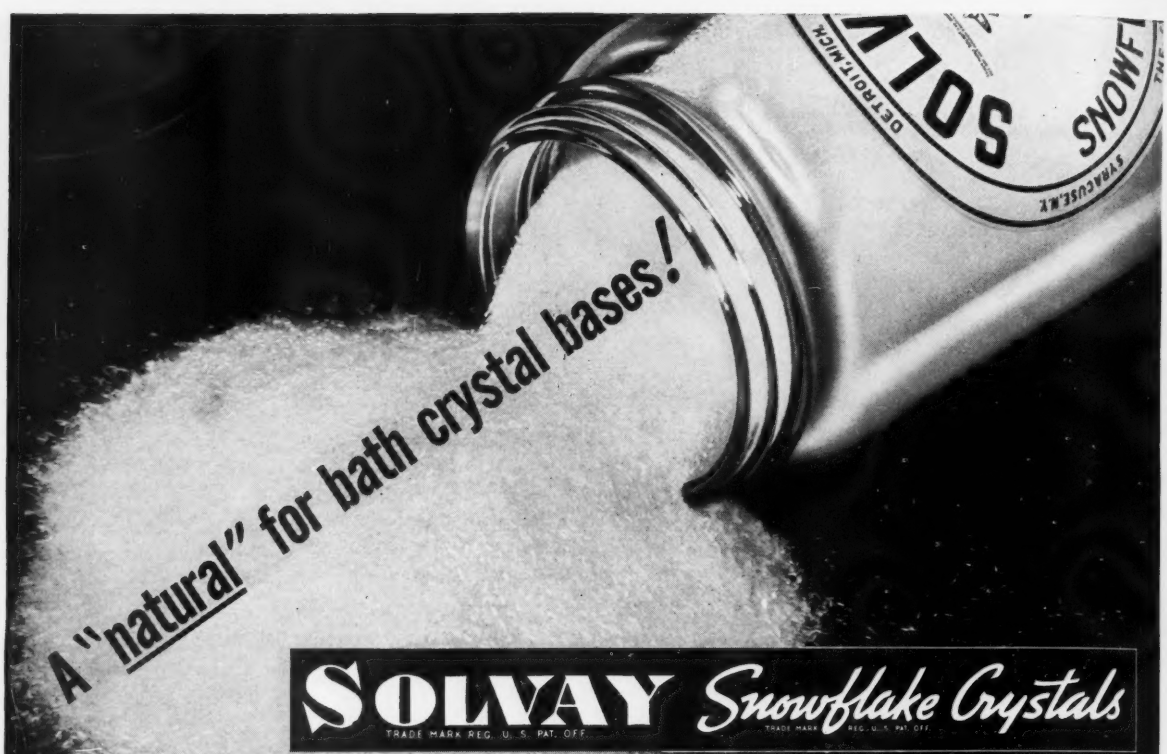
Among other exhibitors were Sugar Beet Products Co., Saginaw, Mich., promoting "Formula S B S II" for control of skin infections; Mer-Kil Chemical Products Co., Chicago, exhibiting their "Mer-Kil" disinfectant for athlete's foot; and the Hild Floor Machine Co., Chicago, who featured a new noiseless vacuum machine and cleaning preparations for use on factory floors, office rugs and upholstery.

Checks "Climalene" Claims

The Federal Trade Commission recently accepted from Climalene Co., Canton, Ohio, an agreement to cease representations which imply that "Climalene" cleaning preparation contains ingredients or has detergent qualities not possessed by any other products, and to cease representing that its product affords protection to fabrics laundered with it or that its use will not cause colors to fade. The company further stipulated that it will stop claiming that its product will remove all tarnish and stain from silver or will polish silver without rubbing; that use of the product results in the complete lathering of soap or will prevent the formation of "soap scum"; that it saves any surface or material to which it is applied or that, unqualifiedly, it is a safe detergent for use on floors, tiles or linoleum.

Toilet Goods Assn. To Meet

The annual convention of the Toilet Goods Association will be held June 9-10-11 at the Waldorf-Astoria Hotel, New York. Features of the opening day are to be an address by president, H. L. Brooks, and reports by general counsel Hugo Mock, and S. L. Mayham for the board of standards. In the evening is to be a theatre program "From the Gay Nineties to the Naughty Forties" in the grand ballroom, followed by a supper dance. Business meetings will be held the morning of the second day with golf for the men at Ridgewood Country Club, Ridgewood, N. J., and bridge and tea for the ladies in the afternoon. On the third day, an executive session will be held in the morning for a general discussion of the problems of the industry. In the afternoon, a discussion of the woman's point of view of trends in the industry will be held. It will be led by beauty editors from leading magazines and newspapers. This is to be followed by a symposium on the raw materials outlook at which representatives of the essential oil industry, the metal industry, plastics, oils and waxes, etc., are scheduled to report. Several authorities from Washington will also be heard. A cocktail party and banquet and dance in the evening will wind up the proceedings. L. R. Root, of Scovill Manufacturing Co., is chairman of the entertainment committee, and H. Gregory Thomas, of Bourjois, Inc., is in charge of arranging the business program.



SNOWFLAKE is a *natural.* . . . It's "made-to-order" for bath crystal bases. . . . It's a made-to-order salesman, too. . . . For once Snowflake is made up and packed in transparent packaging, its own natural beauty helps get your product across.

As the perfect bath crystal base, Snowflake offers you all these advantages. Check them against the base you are using now:

1. **BEAUTIFUL** crystalline appearance!
2. **EFFECTIVE** water softening properties!
3. **READY** solubility!
4. **STABILITY** — non-caking and unchanged chemical composition or physical appearance!
5. **MILDNESS**—non-irritating to the skin!
6. **DETERGENT** properties—aids the soap!
7. **ABSORBS** dyes readily!
8. **EXCELLENT** vehicle for perfumes!
9. **FREE-FLOWING** properties make it ideal for use in filling machines!
10. **LOW COST!**

There's a natural for you, with utility and sales appeal built right into the product! *Remember:* Snowflake *softens* the water, *does not harden it!* WRITE FOR BULLETIN No. 224-B—"Manufacture of Bath Crystals from Snowflake Crystals."

Send in the coupon.

SOLVAY SALES CORPORATION • 40 Rector Street, New York, N. Y.

Gentlemen: Kindly send me a copy of your Bulletin No. 224-B—"How to Manufacture Bath Crystals from Snowflake Crystals."

Name.....

Affiliated with.....

Address.....

City..... *State*..... AJ-641

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SOLVAY SALES CORPORATION

Alkalies and Chemical Products Manufactured by The Solvay Process Company

40 RECTOR STREET NEW YORK, N. Y.

60th ANNIVERSARY 1881 • 1941

Chicago Golf Tournament

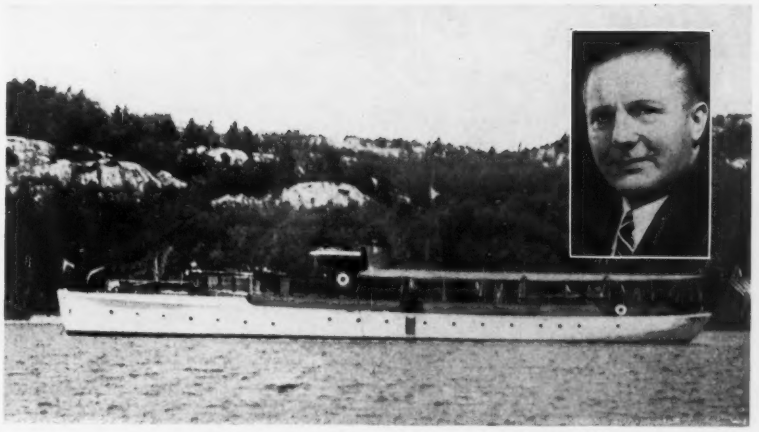
The opening tournament of the Golf Auxiliary of the Chicago Drug and Chemical and Chicago Perfumery, Soap and Extract Associations was held May 13th at Itasca Country Club. A record breaking turnout for the first tournament was on hand to compete for prizes which were awarded at the banquet in the evening. Prize winners were as follows: Class A—1st. A. C. Drury; 2nd. Tom Morgan; 3rd. M. B. Vance; Class B—1st. C. E. Leonard; 2nd. F. Z. Woods; 3rd. A. F. Frantz; Class C—1st. A. O. Nelson; 2nd. A. J. Anderson; 3rd. Dean Hildebrandt; Class D—1st. C. Edwards; 2nd. K. S. Spraker; 3rd. G. F. Pauley. Guest prizes were won by Eugene Budd, George Costello, Jr. and A. O. Hancock. The next tournament is scheduled for June 10th at Olympia Fields C. C.

Fritzsche Executive Dies

Clarence F. Booth, director of the perfume division of Fritzsche Brothers, Inc., New York, died last month at his home in Floral Park, Long Island. He was forty-nine years old and had been associated with the Fritzsche organization for fifteen years. A native of Brooklyn, Mr. Booth was the son of Edwin T. Booth, also a well known perfumer. Graduating from Polytechnic Institute of Brooklyn, the younger Booth was trained in the art of perfuming under his father who was then perfumer for Vantines, Inc. He later worked as perfumer for John Wanamaker, the Aubrey Sisters, Russell & Co., and then Pfaltz & Bauer before joining Fritzsche. His brother, Edwin T. Booth, who survives him, is secretary of Aromatic Products, Inc., New York.

Deupree Addresses A.N.P.A.

"Advertising is essential to the proper growth of the nation and its people," stated Richard R. Deupree, president of Procter & Gamble Co., Cincinnati, in an address before the recent convention of the American Newspaper Publishers Association. The role of advertising in the development of modern American industry was traced by Mr. Deupree who cited as a specific example the history of "Ivory" soap. He pointed out that "Ivory" is sold today at 5 cents a cake, the same price that the housewife paid back in 1880-90, although wages and taxes today are equivalent to twenty times the wages which existed in 1880-90. That it is possible that such expenses could be absorbed was attributed to the fact that "Ivory" has been advertised almost continuously since 1882. The great developments that have taken place in the soap industry have been made possible through advertising, said Mr. Deupree for "without the advertising that created broad consumption for the popular brands there would have been no profits to plow back into the business. And with no profits there would have been no crop of developments and improvements."



Dieterle Heads Chi. Chemists

Edward A. Dieterle, consulting gas and chemical engineer, was elected president of the Chicago Chemists Club at the annual meeting last month. Other officers selected for the ensuing year include: C. W. Lenth, research chemist, Miner Laboratories, first vice-president; E. E. Moore, research chemist, Abbott Laboratories, second vice-president; H. E. Robinson, research chemist, Swift & Co., secretary; E. C. Leamon, chemist, Central Scientific Co., treasurer; and Arthur Schroder, research chemist, Pure Oil Co., trustee.

Bennett Lends Yacht to Govt.

D. A. Bennett, president of Albert Verley, Inc., Chicago, aromatic products, has lent his private yacht, the "Nedra B," to the United States coast guard service for use as a training vessel for coast guard reservists. Mr. Bennett has owned the 118-foot Diesel craft since 1935.

Soap Sales Hit Record High

The first quarter of 1941 was the biggest quarter for soap sales in the past six years according to figures of the Association of American Soap & Glycerine Producers. Sales for the quarter, reported by 76 manufacturers, who are estimated to make nine-tenths of all soap made and sold in the United States, totaled $79,088,874. This includes sales by 70 manufacturers of 818,630,612 pounds of soaps other than liquid, sold at $78,587,168, and sales by 42 manufacturers of 537,890 gallons of liquid soaps, sold at $501,706. Compared with the previous record quarter, the third quarter of 1939, dollars of total soap sales were up 2.1 per cent, while in pounds, soap sales were up 1.9 per cent. Compared with the average quarter of the five year period 1935 through 1939, dollars of total soap sales were up 31.8 per cent, while in pounds, the margin was 30.5 per cent. Compared with the 1940 fourth quarter, dollars of total soap sales were up 33.4 per cent, with a gain of 30.3 per cent in pounds. Compared with the 1940 first quarter, dollars of total soap sales were up 14.8 per cent, while in pounds the gain was 20 per cent.

GERANIUM ALGERIAN SYNTHETIC

A PRODUCT OF IMMEDIATE INTEREST TO SOAPMAKERS

USE of this timely substitute for genuine Algerian Geranium Oil will enable soap manufacturers to duplicate closely the valued odor effect of natural geranium at a cost well within the limits of practical economy. It will go a long way toward maintaining that level of quality formerly attained only through the use of genuine oils.

Our laboratories have developed several grades of GERANIUM ALGERIAN SYNTHETIC to meet the varying needs of individual manufacturers and we shall be glad to submit samples of these upon request. As this is a replacement oil of real merit, may we suggest the advantage of investigating its possible application to **your** product **without delay!**

FRITZSCHE BROTHERS, Inc.

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.

BRANCH STOCKS

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.

FACTORIES AT CLIFTON, N. J AND SEILLANS (VAR) FRANCE

A FRITZSCHE PRODUCT for EVERY PURPOSE . . .

ESSENTIAL OILS . . The FRITZSCHE label on your Essential Oil container is an absolute guarantee of purity and complete conformity to the highest standards. These basic materials are the finest that modern methods and experience can produce.

AROMATIC CHEMICALS . . . For finer aromatic effects and greater economy, choose your chemical requirements from this large and superlative selection of materials.

FIXATIVES . . . Timely now are our four Artificial Animal Scents—Musk, Civet, Castoreum and Ambergris, all especially adaptable to soap making. Our complete line includes, also, Rose Crystals —one of the best fixatives for all-around use.

ANTI-OXIDANTS . . . Developed for the preservation of soaps, animal and vegetable fats and oils, these materials are highly important to the soap manufacturer. Write us for details concerning Oxidex.

BATH SALT PERFUMES . . These materials, combining both perfume and color, greatly facilitate the process of manufacture. Write for circular describing our Bath Perstels and giving complete list of perfume-color blends.

INSECTICIDES AND DISINFECTANTS . . . Some of our most important research achievements have been in this field of investigation. All materials listed in our catalog and recommended for these purposes have behind them guarantees of experience and the indisputable tests of time.

DEODORIZING COMPOUNDS . . . Write us for circulars describing Neutroleum, Javollal, Methalate "C", Safrella and other important deodorizing compounds of proven effectiveness.

TOILET SOAP COMPOUNDS . . . Many new and important toilet soap perfumes have been added to our already extensive line. These provide exquisite odor quality at very low cost. Ask us for particulars.

LIQUID SOAP AND SHAMPOO PERFUMES . . . Being highly soluble and mixing readily with liquid soaps, these special perfume blends are easy to use and low in cost.

DENTAL AND ORAL FLAVORS . . These flavoring specialties are skillfully blended to produce pleasant, clean, refreshing taste effects. We are prepared, also, to create flavor blends to meet your own specifications and costs. Please feel free to consult us.

SEND FOR **SAMPLES**

FRITZSCHE BROTHERS, Inc.

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.

BRANCH STOCKS

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.

FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

New Shulton Toiletries Line

A new line of toilet preparations, including toilet soap, has just been brought out by Shulton, Inc., New York, under the name, "Desert Flower." Packaged in plastic "mystite" containers, items of the new line take their colors, perfumes and design from the flowers of the great American desert. The toilet soap, packaged three cakes to the container, sells for $3.50 complete. Refills are $1.00.

Massee Leaves C-P-P

Burt A. Massee, former vice-president of Colgate-Palmolive-Peet Co., in Chicago, is now associated with United States Travelling Ads, as vice-president in charge of promotion. The new organization is developing a mobile advertising service which utilizes metal signs on the sides of motor trucks engaged in interstate operations.

Bristol-Myers Reports Income

For the quarter ended March 31, Bristol-Myers Co., Hillside, N. J., reported a preliminary net income of $861,490, equal to $1.29 a capital share. For the twelve months ended March 31, consolidated net income was $2,612,102, or $3.91 a share. No comparable figures are available for the like 1940 periods.

Stops "Non-Crumbling" Claim

A stipulation with the Federal Trade Commission to cease using the term "non-crumbling" as descriptive of its "Spotless Wall Paper Cleaner" was recently entered into by Unique Printed Products Co., Terre Haute, Ind. The company has also agreed to stop using the statement "This cleaner does not crumble" when used on certain types of wall paper.

Merrill Recovering From Fall

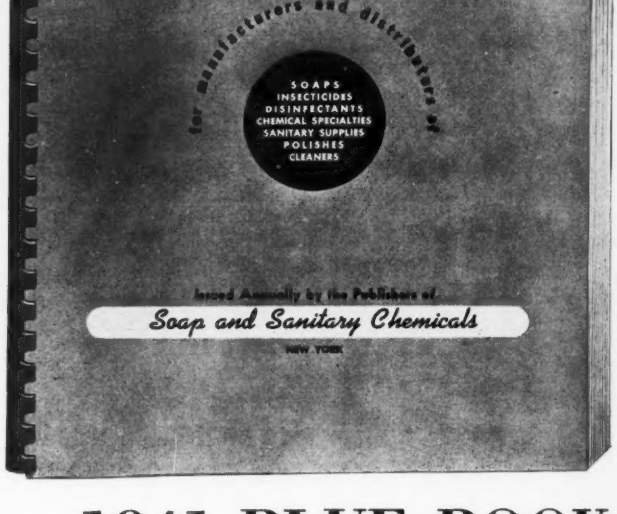
Paul C. Merrill, assistant general manager of Los Angeles Soap Co., Los Angeles, son of F. H. Merrill, president of the company, is recuperating from a fall in the garden of his home late in April, when he suffered a broken leg and arm.

The New 1941 BLUE BOOK

is an invaluable reference volume for every soap and sanitary chemical firm, —that will find service every day in the year. Keep your copy readily available for day-to-day use. Familiarize yourself with the wide variety of useful information it contains.

If you have not received a copy of the new BLUE BOOK ensure your getting one at once by entering a subscription to Soap and Sanitary Chemicals *now.*

A check for $3.00 (foreign $4.00)—the price of a yearly subscription—entitles you to a copy of the BLUE BOOK without extra charge.



Contents of the New 1941 BLUE BOOK

Cold Process Soaps—offering suggestions on various aspects of cold process soap manufacture.

Dry Mixing—Commenting on mixers and the mixing of bath salts, para crystals, detergents, sweeping compounds, etc.

Auto and Furniture Polishes—A review of typical formulas.

Soap Perfuming—A review of perfuming principles with detailed comments on suitability of various essential oils, aromatic chemicals, resins, etc.

Insecticide Perfuming—Suggestions for evaluating suitability, masking power, persistence, etc., of insecticide odors.

Floor Cleaning—A study of materials and methods for the maintenance of wood, marble, tile, terrazzo, cork, linoleum, concrete, asphalt and rubber floors.

Label Taboos—What label statements have been tabooed by the Federal Trade Commission for soaps, insecticides, scouring powders, disinfectants, deodorants, cleaning fluids, etc.

Window and Glass Cleaners—A review of the types of products offered, with suggestions on their formulation.

Specifications—A resume of U. S. specifications for soaps, polishes, waxes, cleaners, etc.

Testing Methods—Official methods of N.A.I.D.M. for testing insecticides and disinfectants.

Index To Soap—Composite index to the monthly issues of *Soap and Sanitary Chemicals* for the past five years.

Plus a complete 125-page Buyers Guide Section listing sources of supply for a complete line of raw materials, machinery and equipment bought by manufacturers of soaps and sanitary chemicals.

MAC NAIR-DORLAND COMPANY

254 WEST 31st STREET **NEW YORK, N. Y.**

CONTRACTS AWARDED

Printing Office Bids

The following low bids were submitted in a recent opening by the office of the Public Printer, Washington, D. C.: Socony-Vacuum Oil Co., Baltimore, 4,000 lbs. ozokerite wax, 18.5c; Colgate-Palmolive-Peet Co., Jersey City, 25,000 lbs. glycerine, 12.3c; Washington Sales Co., Washington, 20,000 lbs. trisodium phosphate, 2.54c.

Boiler Compound Bid

Tex-ite Products Co., Bklyn., was the low bidder on 329,000 lbs. boiler compound at $15,827.30 in a recent opening by the Navy Department, Washington, D. C.

Soap Awards

Colgate - Palmolive - Peet Co., Jersey City, was awarded a contract for 450,000 cakes of soap at 3.95c in a recent opening by the Army Quartermaster Supply Corps at Chicago. In the same opening, M. H. Fairchild & Bros., Chicago, was awarded a contract for 50,000 cakes at 2.225c.

Hypochlorite Award

In a recent opening by the Army Quartermaster Corps, Bklyn., Hood Chemical Co., New York, was awarded contracts for 210 cans calcium hypochlorite at 93.5c, and 335 cans also at 93.5c. Mathieson Alkali Works, New York, received a contract for 2,781 cans at $1.23.

Hand Cleaner Award

Sugar Beet Products Co., Saginaw, Mich., was awarded a contract for a quantity of hand cleaner compound at $1,655 in a recent opening by the Army Ordnance Supplies of the War Department.

Rust Compound Award

R. M. Hollingshead Corp., Camden, N. J., was awarded a contract for 15,000 lbs. rust preventive compound at 6.8c. in a recent opening by the Army Quartermaster Corps, Chicago.

Hypochlorite Bids

In a recent opening by the Army Quartermaster Corps, Jeffersonville, Ind., Hood Chemical Co., New York, was awarded a contract for 12,500 lbs. calcium hypochlorite at 24.5c. In another opening at Ft. Sam Houston, Tex., Hood Chemical Co., received a contract for 6,000 lbs. at 26.6c.

Hypochlorite Award

Hood Chemical Co., New York, was recently awarded a contract for 18,000 lbs. calcium hypochlorite at 24.4c in a recent opening by the Army Quartermaster Corps, Jeffersonville, Ind.

Panama Canal Bids

In a recent opening by the Panama Canal, Washington, D. C., Cudahy Packing Co., Chicago, submitted the low bid of 4.2c on 1,000 lbs. scouring powder. In the same opening Procter & Gamble Distributing Co., was low on 5,000 cakes of soap at 1.025c.

Metal Cleaner Bid

Pennsylvania Salt Mfg. Co., Phila., was the low bidder on 100,000 lbs. metal cleaner in 400-lb. one-way shippers at 5.4c in a recent opening by Army Ordnance Supplies, Rock Island Arsenal, Ill.

Panama Canal Bids

In a recent opening by the Panama Canal, Washington, D. C., the following low bids were submitted: Stevens Soap Corp., Bklyn., 20,000 lbs. trisodium phosphate, $880; Colgate-Palmolive-Peet Co., Jersey City, 15,000 lbs. laundry soap, $579; Newell Gutradt Co., San Francisco, 15,000 lbs. salt-water soap, $366 and 2,250 lbs. floating toilet soap, $184.50; Chemical Mfg. and Dist. Co., Easton, Pa., 60,000 lbs. soap powder, $1,974.

Army Ordnance Awards

In a recent opening by the Army Ordnance Supplies, San Antonio Arsenal, Texas, R. M. Hollingshead Co., Camden, N. J., was awarded a contract for 4,000 pts. metal paste polish at $500; Thompson Hayward Chem. Co., Kansas City, Mo., received a contract for 3,000 lbs. flake naphthalene at $237 and Peaslee Gaulbert Corp., San Antonio, Texas, was awarded a contract for 2,500 lbs. cleaning compound at $275.

Medical Corps Award

DuBois Soap Co., Cincinnati, was awarded a contract for 588 drums dishwashing compound at $9,645.48 in a recent opening by Medical Corps, Bklyn.

Hypochlorite Award

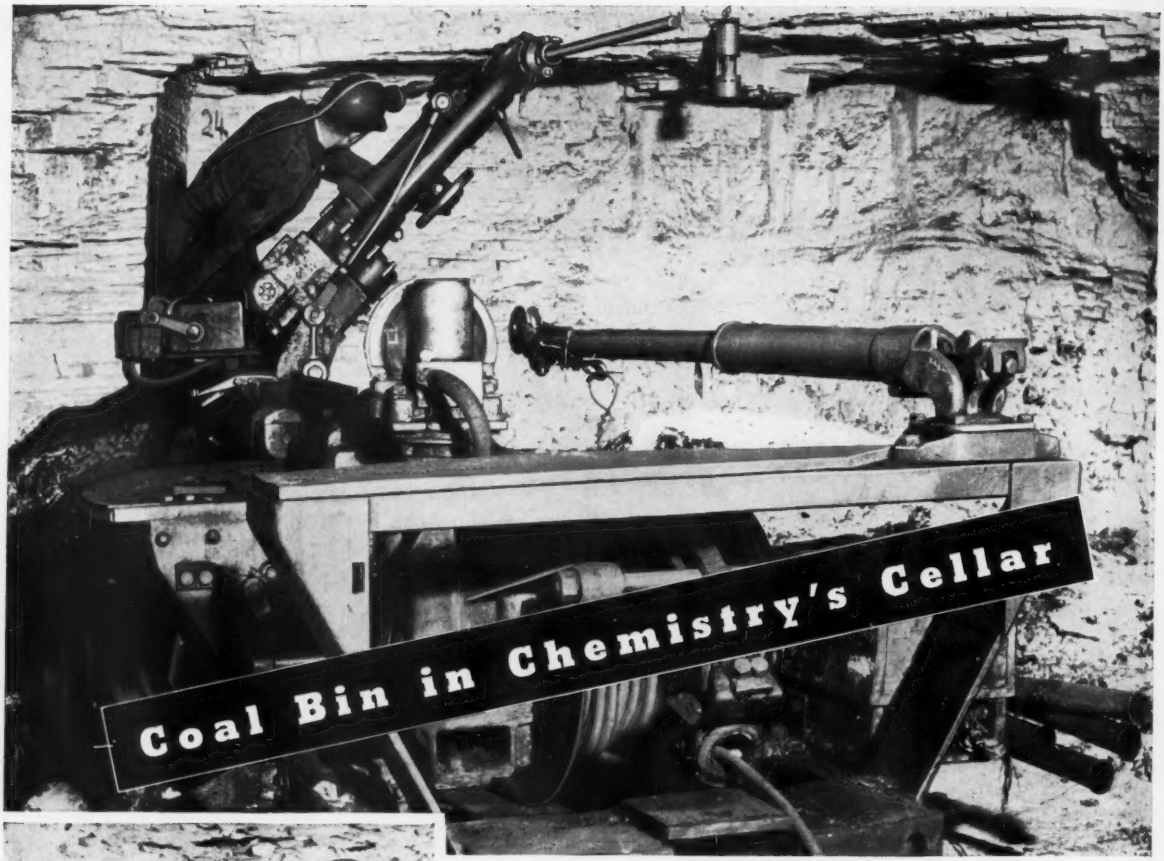
F. H. Ross & Co., Atlanta, was awarded a contract for 167 cases calcium hypochlorite at $2,613.55 in a recent opening by the Army Quartermaster Corps, Atlanta.

Allondon-Bayonne Name Change

All assets, good will, unfilled orders, debts and liabilities of Allondon-Bayonne Co., 11 Park Place, New York, aromatic chemical and essential oils, have been taken over by its successor, Bayone Co., which continues under the same management but at 404 Fourth Ave.

Super Suds Ad Theme

Colgate - Palmolive - Peet Co., Jersey City, N. J., is using the theme "206 per cent as much suds" in newspaper copy for "Concentrated Super Suds" which was released in May. Previous claims were that the product produced "more suds," whereas the new copy stresses that when tested against other popular laundry soap powders, Concentrated Super Suds makes "206 per cent as much suds, cup for cup as the average of all others tested."



Drilling in the Ford Collieries, in Allegheny County, Pennsylvania, which supply Michigan Alkali Company with a portion of its coal.

Shotfirer, assisted by loader, stemming shot hole in which powder and electric detonator have been placed.

BASIC chemicals are the foundation stones of the entire chemical industry and many other industries besides. Their manufacture is important. For upon the skill and integrity with which they are manufactured depends the quality of the finished products they help to form.

Coal is a vital material in the conversion of salt and limestone into alkalies, and the nation's collieries provide never-ending tons of bituminous which contribute constantly to the steady flow of high-grade basic chemicals from the Michigan Alkali plants at Wyandotte.

For more than fifty years, Michigan Alkali has maintained an uninterrupted production of the chemical materials you need . . . in quantities to meet your production schedules . . . and of the quality that will help guard your reputation and satisfy YOUR customers.

MICHIGAN ALKALI COMPANY

PLANTS: WYANDOTTE, MICHIGAN • *GENERAL SALES OFFICE:* 60 E. 42ND STREET, NEW YORK CITY

DISTRIBUTORS IN ALL PRINCIPAL CITIES • *Manufacturers of:* Soda Ash • Caustic Soda • Dry Ice
Bicarbonate of Soda • Calcium Chloride • Liquid Chlorine • Calcium Carbonate • Coke • Cement

NEW TRADE MARKS

The following trade-marks were published in the May issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20. 1905. as amended March 2. 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

PEP BOYS — This in outline letters over drawing of three men describing hand soap. Filed by The Pep Boys—Manny, Moe and Jack. Phila., July 5. 1940. Claims use since May 1. 1940.

DOMINANT—This in solid letters over circle describing polish. Filed by Dominant Prods. Co., New York. Nov. 1. 1940. Claims use since Feb. 1. 1936.

CITRIFOAM—This in solid letters describing cleaner. Filed by J. B. Ford Co., Wyandotte, Mich., Feb. 27. 1941. Claims use since Dec., 1940.

KLEENAPART — This in solid letters describing metal cleaner. Filed by Selig Co., Atlanta, Ga., March 3. 1941. Claims use since Sept. 4. 1940.

MIRACLE BLEACH — This in solid letters describing water bleach. Filed by Crown Products Corp., Los Angeles, Feb. 10. 1941. Claims use since Dec. 1. 1940.

LUR-EM—This in solid letters describing insecticide. Filed by Peride Products, Brooklyn, Feb. 14. 1941. Claims use since Jan. 7. 1940.

NU SHEEN—This in solid letters describing cleanser and polish. Filed by Star Chemical Co., Chicago. Apr. 18. 1938. Claims use since Apr. 1. 1935.

AQUAFIX—This in solid letters describing boiler compounds. Filed by Warner Chemical Co., New York. Mar. 17. 1941. Claims use since Jan. 3. 1941.

AQUAPHOS—This in solid letters describing boiler compounds. Filed by Warner Chemical Co., New York. Mar. 17. 1941. Claims use since Jan. 3. 1941.

DENZYLOR—This in solid letters describing dentifrice. Filed by E. R. Squibb & Sons, New York. Jan. 14. 1941. Claims use since Jan. 6. 1941.

SUPERKLEEN — This in white on black lettering over initials BSW describing stain remover. Filed by Superkleen Co., New York. Feb. 26. 1941. Claims use since Nov. 28. 1939.

MIDGET MAID—This in solid letters describing soap cleaning pads. Filed by Ohio Match Co., Wadsworth, O., Mar. 7. 1941. Claims use since Apr. 15. 1931.

P.A.L.—This in outline letters describing athlete's foot preparation. Filed by Passaic Analytical Laboratories, Passaic, N. J., Mar. 11. 1941. Claims use since Aug. 11. 1936.

ORBO—This in solid letters describing soap. Filed by Brillo Mfg. Co., Bklyn., N. Y., Sept. 5. 1939. Claims use since June 8. 1939.

TOMALENE—This in fancy letters describing cleanser. Filed by Tomalene Mfg. Co., Lock Haven, Pa., June 11. 1940. Claims use since Mar. 1. 1940.

CEDAR-SAN—This in solid letters describing floor sweeping compound. Filed by Huntington Laboratories, Huntington, Ind., Oct. 10, 1940. Claims use since 1925.

A-2-Z—This in solid letters describing soap. Filed by Anderson Co., Gary, Ind., Feb. 28. 1941. Claims use since Jan. 29. 1941.

TEL-A-FREND — This in solid letters describing soap. Filed by Anderson Co., Gary, Ind., Feb. 28. 1941. Claims use since Jan. 30. 1941.

HYDRO-SEAL—This in outline letters describing motor cleaner. Filed by Curran Corp., Malden, Mass., Feb. 26. 1941. Claims use since Nov., 1939.

PLAXOL—This in solid letters describing dental powder. Filed by Clark-Cleveland, Inc., Binghamton, N. Y., Mar. 19. 1941. Claims use since Jan. 7. 1941.

STAINEX—This in solid letters describing stain remover. Filed by Anderson Co., Gary, Ind., Feb. 28, 1941. Claims use since Jan. 30. 1941.

KING COTTON—This in solid letters over drawing of crown describing shaving cream. Filed by King Cotton Laboratories, Memphis, Mar. 3. 1941. Claims use since Aug. 16. 1940.

SANDOZOL—This in solid letters describing detergent. Filed by Sandoz Chemical Works, New York. Mar. 6. 1941. Claims use since May, 1933.

P C—This in white on black letters over drawing of rodent skeleton describing rodent killer. Filed by P. C. Product Co., St. Louis, Sept. 30, 1940. Claims use since Sept. 26, 1940.

NU-SHEEN—This in solid letters describing polish. Filed by Continental Car-Na-Var Corp., Brazil, Ind. Filed Nov. 22. 1940. Claims use since July 23. 1928.

STERLAC—This in solid letters describing disinfectant. Filed by Abbott Labs., North Chicago, Ill., March 22. 1941. Claims us since Dec., 1939.

SOAP SPECIFICATIONS

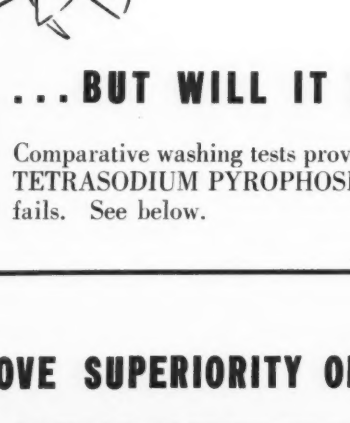
What belongs in a properly drafted soap specification? And what items sometimes included are distinctly out of place? The whole subject of soap specifications will be covered authoritatively in our next issue. The author,— Harry Trevithick, chief chemist at the New York Produce Exchange, and chairman of Committee D-12 of the A. S. T. M., presently engaged in drafting a complete set of specifications and standard testing methods for soaps and detergents.

. . . BUT WILL IT DO A CLEANING JOB?

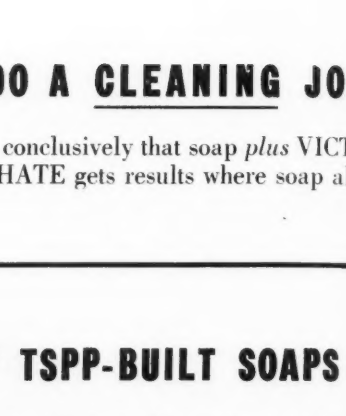
Comparative washing tests prove conclusively that soap *plus* VICTOR TETRASODIUM PYROPHOSPHATE gets results where soap alone fails. See below.

WASHING TESTS PROVE SUPERIORITY OF TSPP-BUILT SOAPS

SOILED SAMPLE PRIOR TO WASHING



SOILED SAMPLE WASHED IN PURE SOAP (Conc. 0.30%)



SOILED SAMPLE WASHED IN 85% SOAP + 15% TSPP (Conc. 0.30%)

"BIG 3" USE TETRA BECAUSE IT HELPS SELL SOAP

Today . . . the three leading brands of powdered soap *all* contain TETRASODIUM PYROPHOSPHATE . . . because "TETRA" helps sell soap. TSPP gets the kind of results housewives want,—cleaner, whiter rinsing clothes plus a 20% to 30% saving in soap. It's as gentle on the hands, too, as the purest soap! Why not let this amazing new builder give *your* soap a boost to bigger sales . . . as it has for others? Send today for Research Bulletin "The Function of Tetrasodium Pyrophosphate in Soap Mixtures."

Victor Chemical Works, 141 W. Jackson Blvd., Chicago, Ill.
HEADQUARTERS FOR PHOSPHATES

VICTOR
TETRASODIUM PYROPHOSPHATE

TETRAPOTASSIUM PYROPHOSPHATE
(For Liquid Soap)

AMERICAN MAID—This in outline letters over drawing of woman describing wax polish. Filed by Western Paint & Varnish Co., Duluth, Minn., Feb. 21, 1941. Claims use since Feb. 14, 1935.

CARNU—This in solid letters describing automobile polish. Filed by S. C. Johnson & Son, Racine, Wisc., Feb. 24, 1941. Claims use since July 1, 1919.

THRIFT—This in solid letters describing floor wax. Filed by Derris, Inc., New York, March 22, 1941. Claims use since March 1, 1941.

FILMOFOAM—This in solid letters describing cleaner. Filed by Schepp Laboratories, East Paterson, N. J., Feb. 26, 1941. Claims use since Dec. 18, 1940.

PINEHEART — This in semi-script letters describing soap. Filed by Claire Mfg. Co., Chicago, March 24, 1941. Claims use since March 1, 1940.

REPRESENTATION—Drawing of colored woman scrubbing alongside package describing soap. Filed by Dr. W. J. Ross Co., Los Alamitos, Calif., March 10, 1941. Claims use since March, 1939.

"I'LL DIE FOR S. L. COWLEY"—This in outline letters over drawing of rat. Filed by Cowley Mfg. Co., Hugo, Okla., May 29, 1940. Claims use since April 20, 1940.

NNOP—This in solid letters describing parasiticides. Filed by Atlas Powder Co., Wilmington, Del., March 4, 1941. Claims use since Oct. 29, 1940.

Trade Marks Granted

386,921. Cleaner. C. I. Togstad Co., Kokomo, Ind. Filed Aug. 16, 1939. Serial No. 422,683. Published Feb. 18, 1941. Class 4.

386,929. Shampoo. Clairol, Inc., New York. Filed Nov. 15, 1939. Serial No. 425,640. Published Feb. 11, 1941. Class 6.

386,946. Shampoo. A. Breslauer Co., New York. Filed May 28, 1940. Serial No. 432,422. Published Feb. 11, 1941. Class 6.

386,949. Cleaner. An-Our Co., Cincinnati. Filed June 18, 1940. Serial No. 433,133. Published Feb. 18, 1941. Class 4.

386,951. Tooth paste. Leo Lescinskis, New Haven, Conn. Filed July 2, 1940. Serial No. 433,614. Published Nov. 26, 1940. Class 6.

386,963. Cleaner. Fisher Products Corp., Washington, D. C. Filed Sept. 12, 1940. Serial No. 435,898. Published Feb. 18, 1941. Class 4.

386,966. Disinfectants. Florozone Co., Bklyn., N. Y. Filed Sept. 27, 1940. Serial No. 436,414. Published Feb. 11, 1941. Class 6.

386,992. Cleaner. Locke Insulator Corp., Baltimore, Md. Filed Nov. 15, 1940. Serial No. 437,900. Published Feb. 18, 1941. Class 4.

387,021. Wetting agent. General Dyestuff Corp., New York. Filed Dec. 5, 1940. Serial No. 438,537. Published Feb. 18, 1941. Class 6.

387,022. Wetting agent. General Dyestuff Corp., New York. Filed Dec. 5, 1940. Serial No. 438,538. Published Feb. 18, 1941. Class 6.

387,038. Cleaner. Davies-Young Soap Co., Dayton. Filed Dec. 10, 1940. Serial No. 438,687. Published Feb. 18, 1941. Class 4.

387,064. Antiseptic. J. Leon Lascoff & Son, New York. Filed Dec. 17, 1940. Serial No. 438,950. Published Feb. 11, 1941. Class 6.

387,069. Cleaner. Thomas D. Sullivan, Washington, D. C. Filed Dec. 19, 1940. Serial No. 439,032. Published Feb. 18, 1941. Class 4.

387,074. Shampoo. Davies-Young Soap Co., Dayton. Filed Dec. 30, 1940. Serial No. 439,269. Published Feb. 11, 1941. Class 6.

387,078. Insecticide. General Chemical Co., New York. Filed Jan. 2, 1941. Serial No. 439,339. Published Feb. 11, 1941. Class 6.

387,079. Insecticide. Keystone Chemical Co., Cleveland. Filed Jan. 2, 1941. Serial No. 439,346. Published Feb. 11, 1941. Class 6.

387,084. Parasiticides. California Spray-Chemical Corp., Wilmington, Del. Filed Jan. 7, 1941. Serial No. 439,458. Published Feb. 18, 1941. Class 6.

387,122. Polish. General Tire & Rubber Co., Akron, Ohio. Filed July 30, 1936. Serial No. 381,611. Published Feb. 25, 1941. Class 16.

387,149. Cleaner. S. C. Johnson & Son, Racine, Wisc. Filed July 22, 1940. Serial No. 434,237. Published Feb. 25, 1941. Class 4.

387,150. Polish. S. C. Johnson & Son, Racine, Wisc. Filed July 22, 1940. Serial No. 434,238. Published Feb. 25, 1941. Class 16.

387,241. Soap flakes. Charles Herman Co., New York. Filed Jan. 9, 1941. Serial No. 439,524. Published Feb. 25, 1941. Class 4.

387,282. Soap. Embalmers' Supply Co., Westport, Conn. Filed Nov. 30, 1939. Serial No. 426,088. Published March 4, 1941. Class 4.

387,283. Water softener. Hylo Co., Houston, Tex. Filed Dec. 5, 1939. Serial No. 426,258. Published Feb. 25, 1941. Class 6.

387,285. Insecticide. A. D. Chapman & Co., Chicago. Filed Jan. 2, 1940. Serial No. 427,067. Published Feb. 25, 1941. Class 6.

387,286. Insecticide. A. D. Chapman & Co., Chicago. Filed Jan. 2, 1940. Serial No. 427,068. Published Feb. 25, 1941. Class 6.

387,291. Disinfectants. Western Chemical Co., St. Joseph, Mo. Filed Feb. 9, 1940. Serial No. 428,410. Published Apr. 23, 1940. Class 6.

Monsanto Elects Cole

Robert R. Cole, general manager of the phosphate division of Monsanto Chemical Co., St. Louis, was elected a vice-president of the company at a meeting in St. Louis. Mr. Cole has been with Monsanto since 1935. In 1938 he was made production manager of the phosphate division, and in 1939 he became general manager.

Former "Gold Dust" V-P Dies

Walter B. Pearson, retired vice-president of the old American Cotton Oil Co., New York, formerly the manufacturer of "Gold Dust" cleansing compound, died May 25 after an illness of several months. He was sixty-six years old. Mr. Pearson retired from business in 1936 when the company's successor, Gold Dust Corp., became Hecker Products Corp.

Enters Crude...Exits Purified...Decolorized

This is no "fish story"! Marine, Vegetable or Animal Oils...in the crude state...when bleached with SPECIAL FILTROL, SUPER FILTROL or NEUTROL will, in many cases be finished products, purified, decolorized and ready for the market...a finer quality and at a lower cost.

SPECIAL FILTROL, while well suited for most all fats and oils, is especially effective on drying and semi-drying varieties. SUPER FILTROL is used widely in the bleaching of all types of fats and oils. NEUTROL is an efficient agent for processing refined and edible fats and oils.

For top quality at low operating cost, use FILTROL bleaching earths.

FILTROL CORPORATION

GENERAL OFFICES: 315 WEST FIFTH ST., LOS ANGELES, CALIF.

PLANTS...VERNON, CALIFORNIA
JACKSON, MISSISSIPPI

CABLE ADDRESS — FILTROL—LOS ANGELES

AGENTS AND WAREHOUSE STOCKS IN PRINCIPAL REFINING CENTERS OF THE WORLD

Peet-Grady Test

Standard I. & D. Method For Testing Liquid Household Insecticides

Where?

Complete Revised Text In Your Copy of 1941 Blue Book and Catalog

The new 1941 BLUE BOOK contains not only the complete text of the PEET-GRADY test, but also the Seil Method, the Gnadinger-Corl Method, the Wilcoxon-Holaday Method and the Crystalization Rotenone Method. The new BLUE BOOK also contains articles on the following subjects:

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Furniture and Auto Polishes

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Glass Cleaners

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Comments on Dry Mixing

Get acquainted with your BLUE BOOK! Keep it handy for daily use! It contains a host of valuable reference material.

Copies, $1.00

Furnished without charge with yearly $3.00 *subscription to SOAP (Foreign* $4.00*). A limited stock of the* 1941 *edition is still available.*

▼

MACNAIR-DORLAND CO.

Publishers of *Soap & Sanitary Chemicals*

254 WEST 31st ST. NEW YORK, N. Y.

RAW MATERIAL MARKETS

As of May 28, 1941

NEW YORK — Quotations on most organic raw materials used in the manufacture of soaps and sanitary products continued to advance during the past month, although the rate of advance on the fatty materials slackened somewhat and the net changes noted were smaller than they had been for like periods for the past several months. Tallow, greases, fatty acids, coconut oil, palm oil, other imported vegetable oils, the domestic vegetable oils, and a great many essential oils are now quoted at higher prices than a month ago. Among insecticide materials, the price of pyrethrum extract was reduced slightly as a competitive reaction while rotenone-bearing roots were advanced. The higher prices on derris and cube are attributed to a growing scarcity of supplies. Candelilla wax and all grades of carnauba wax were advanced to higher levels during the month as were certain of the aromatic chemicals. Other chemical raw materials remained stable.

Animal Fats

The price movement on the major animal fats continued in an upward direction this period; price changes were comparatively small, however. Current prices are ½ cent above those of a month ago, being 7⅞ cents a pound for extra tallow, loose, f.o.b., N. Y.; 7½ cents a pound for yellow grease, and 8 cents a pound for choice white grease. Offerings were generally light. According to statistics recently released by the Bureau of Agricultural Economics, domestic production of inedible tallow for the first quarter of 1941 was approximately 251,569,000 pounds as compared with 248,181,000 pounds for the first quarter of 1940. Consumption was also higher for the first quarter totaling 262,080,000 pounds as compared with 212,077,000 pounds for the 1940 first quarter.

Vegetable Oils

After being advanced steadily throughout the first three weeks of the period, coconut oil was reduced somewhat during the past week following an announcement that the Maritime Commission had recommended that the recent $10 per ton increase in freight rates be rescinded. The rates, as last reported, for shipment from the Philippines to U. S. Atlantic ports, are: coconut oil, $21.50 per ton; copra, $20 per ton. From the Philippines to Pacific Coast ports: coconut oil, $16.50 per ton; copra, $15 per ton. Coconut oil is currently quoted at 7 cents per pound in tanks. Spot oil prices were not affected as much as were forward positions as the futures had been quoted for some time with freight advances taken into account. Bulk prices dropped more than the ½ cent per pound reduction in freight rates. Palm oil was advanced during the period to a price ¼ cent higher than a month ago, the Sumatra material being currently quoted at 5½ cents a pound, tanks, N. Y. Also higher than a month ago are prices on soyabean oil, corn oil, teaseed oil, cottonseed oil, linseed oil, the vegetable oil fatty acids, olive oil and olive foots.

Advance Glycerin 2c Per Lb.

Effective May 21, refined glycerin was advanced by producers 2 cents a pound, the first change in the price of refined glycerin since November 2, 1938. There is no scarcity of glycerin stocks; the advance was made to distribute higher production costs between price of soap and price of glycerin. Current prices are: C.P., tanks, 14¼ cents a pound; drums, car lots, 14½ cents; less car lots, 15 cents; cans less car lots, 16½ to 17 cents; high gravity, drums, car lots, 14 cents; less car lots, 14½ cents; tanks, 13¾ cents; saponification, industrial users, tanks, 11 cents; drums, car lots, 11½ cents; less car lots, 12¼ cents; refiners, nominal at 10 cents; soaplye, 9 cents, nominal. No further change in price of refined glycerin is indicated at the present time, although it is reported soaplye holders want higher prices.

Essential Oils

Increasing difficulty of obtaining shipping space brought higher prices on many essential oils this period. The Far Eastern oils, in particular, showed strength, with citronella, lemongrass, cassia, vetiver and patchouli being quoted at fairly sharp advances. Also at higher levels than a month ago are sweet almond, bois de rose, cajeput, cananga, hemlock, lavender spike, pine needle Siberian, peppermint and California orange. The change in quotation on California orange, distilled was the first since July, 1936. Current prices are $1.15 for the distilled material and $2.75 for the expressed. The following oils dropped during the period: anise, camphor, cedar leaf, nutmeg and petitgrain.

98-100%

CYCLOHEXANE

METHYL CYCLOHEXANE

CYCLOHEXANOL

METHYL CYCLOHEXANOL

CYCLOHEXANONE

METHYL CYCLOHEXANONE

98-100%

Prompt Quantity Shipments on Barrett Hydrogenated Coal-Tar Chemicals

New, improved production methods developed by Barrett—combined with increased capacity—facilitate prompt quantity deliveries on cyclic hydrocarbons, alcohols, and ketones.

For the soap, insecticide and disinfectant trade, the alcohols have many useful and interesting properties. These include good solvent power, high flash point, "coupling" action, surface tension reduction and emulsion stabilizing. They are especially effective in solvent soaps used in the dry cleaning, textile and general degreasing fields. The ketones are excellent solvents for many organic materials and this property opens up many uses.

A new illustrated booklet, "Barrett Hydrogenated Coal-tar Chemicals," is now available. It gives specifications, other properties and some suggested applications. Write for your copy today. There is no charge or obligation.

THE BARRETT COMPANY
40 Rector Street New York, N. Y.
. . . One of America's Great Basic Businesses

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PARENTO'S *famous* SOUTHERN LILAC

is now available in a lower priced version . . . for SOAPS

SOUTHERN LILAC SAVON

a sample is ready for you

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Executive Offices and Laboratories
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LOS ANGELES

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CHICAGO
SAN FRANCISCO

COMPAGNIE PARENTO, LTD.
TORONTO, ONT. CANADA

RAW MATERIAL PRICES

(As of May 28, 1941)

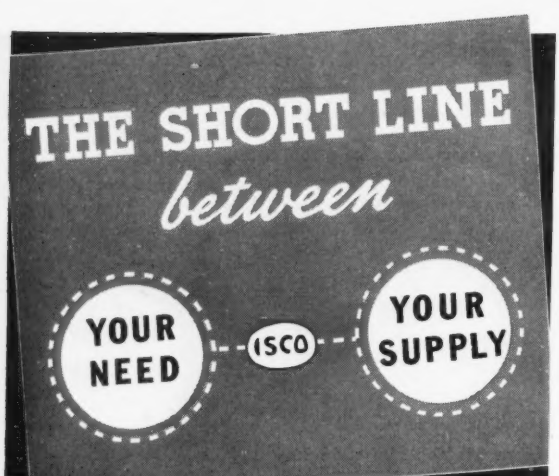
Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums	lb.	$ .07½	$ .08
Acid, Boric, bbls., 99½%	ton	96.00	128.00
Cresylic, drums	gal.	.68	.70
Low boiling grade	gal.	.68	.70
Muriatic, C. P., carboys	lb.	.08	—
Oxalic, bbls.	lb.	.10¾	.12
Adeps Lanae, hydrous, drums	lb.	.24½	.25
Anhydrous, drums	lb.	.26½	.27
Alcohol, Ethyl, U.S.P., bbls.	gal.	6.02½	6.09
Complete Denat., SD1, dms., ex.	gal.	.33	.39
Alum. Potash lump, bbls.	lb.	.04	—
Ammonia Water, 26°, drums	lb.	.02¼	.02½
Ammonium Carbonate, tech., bbls.	lb.	.08	—
Bentonite, 1, works, 325 mesh	ton	16.00	—
Bentonite, 2, works, 200 mesh	ton	11.00	—
Bleaching Powder, drums	100 lb.	2.00	3.35
Borax, pd., cryst., bbls., kegs	ton	58.00	74.00
Carbon Tetrachloride, car lots	gal.	.66½	1.10
L. C. L.	gal.	.73	1.20
Caustic, see Soda Caustic, Potash Caustic			
China Clay, filler	ton	10.00	16.00
Cresol, U.S.P., drums	lb.	.09¾	.10¼
Creosote Oil	gal.	.13½	.14½
Feldspar, works (200 to 325 mesh)	ton	32.00	35.00
Formaldehyde, bbls.	lb.	.05½	.06
Fullers Earth	ton	15.00	—
Glycerine, C.P., drums	lb.	.14½	—
Dynamite, drums	lb.	—	Nom.
Saponification, drums	lb.	.11½	.12¼
Soap, lye, drums	lb.	.09	—
Hexalin, drums	lb.	.30	—
Lanolin, see Adeps Lanae.			
Lime, live, bbls.	ton	6.25	13.00
Mercury Bichloride, kegs	lb.	2.24	2.39
Naphthalene, ref. flakes, bbls.	lb.	.07	.07¼
Nitrobenzene (Mirbane) drums	lb.	.08	.09
Paradichlorbenzene, drums	lb.	.11	.13½
Petrolatum, bbls. (as to color)	lb.	.02¾	.07½
Phenol (Carbolic Acid), drums	lb.	.13	.14¾
Pine Oils, bbls.	gal.	.50	.59
Potash, Caustic, solid	lb.	.06¼	.06¾
Flake, 88-92%	lb.	.07	—
Liquid, 45% basis	lb.	.02⅞	.03¾
Potassium Carbonate, solid	lb.	.06½	.06¾
Liquid	lb.	.02¾	.03⅛
Pumice Stone, powder	100 lb.	No Prices	
Rosins (net wt., ex yard, New York)—			
Grade D to H	100 lb.	2.49	2.54
Grade I to N	100 lb.	2.54	2.69
Grade WG to X	100 lb.	2.88	3.21
Wood, ex. dock	100 lb.	1.54	1.90
Rotten Stone, pwd., bbls.	lb.	—	—
Silica	ton	20.00	27.00
Soap, Mottled	lb.	.04⅛	.04½
Olive Castile, bars	lb.	.28	.38
Olive Castile, powder	lb.	.33	.40
Powdered White, Neutral	lb.	.24	—
Olive Oil Foot, bars, 68-70%	lb.	.18	—
Green, U.S.P.	lb.	.09	.10
Tallow Chips, 88%, car lots	lb.	.09½	—
Soda Ash, cont., wks., bags, bbls.	100 lb.	1.10	1.35
Carlots, in bulk	100 lb.	.90	.95
Soda Caustic, cont., wks., solid	100 lb.	2.30	—
Flake	100 lb.	2.70	2.95
Liquid, tanks, 47-49%	100 lb.	1.95	—
Soda Sal., bbls.	100 lb.	1.10	1.30
Sodium Chloride (Salt)	ton	15.00	15.60
Sodium Fluoride, bbls.	lb.	.07	.08¼
Sodium Hydrosulfite, bbls.	lb.	.16	.17
Sodium Metasilicate, ground	100 lb.	3.75	4.80
Crystalline	100 lb.	2.35	3.35
Sodium Pyrophosphate	100 lb.	5.10	5.60
Sodium Silicate, 40 deg., drum	100 lb.	.80	1.20
Drums, 52 deg. wks.	100 lb.	1.40	1.80
Tar Acid Oils, 15-25%	gal.	.22	.27
Triethanolamine	lb.	.19	.20
Trisodium Phosphate, bags, bbls.	100 lb.	2.35	3.05
Zinc Oxide, lead free	lb.	.06½	.07

Oils — Fats — Greases

Babassu, tanks, futures	lb.	.09¾	Nom.
Castor, No. 1, bbls.	lb.	—	.11¾
No. 3, bbls.	lb.	—	.11½
Coconut (without excise tax)			
Manila, tanks, N. Y.	lb.	.07	—
Tanks, Pacific Coast, futures	lb.	.06	—
Copra, bulk, coast	lb.	.0370	—
Corn, tanks, West	lb.	.10½	—
Cottonseed, crude, tanks, mill	lb.	.09¼	.09½
PSY, futures	lb.	.10½	—
Fatty Acids—			
Corn Oil, tanks, Chicago	lb.	.11	.11¼
Coconut Oil, tanks, Twitchell, Chi.	lb.	.13	.13¼
Cotton Oil, tanks, Chicago	lb.	.09½	.09¾
Settled soap stock, Chicago	lb.	.03½	.03¾
Boiled soap stock, 65%, Chi.	lb.	.04½	.04¾
Foots, 50%, Chicago	lb.	.02½	.02¾
Red Oil, bbls., dist. or sapon.	lb.	.10½	.12¼
Tanks	lb.	.09¾	.10½
Stearic Acid, saponif.			
Double pressed	lb.	.12¾	.14½
Triple pressed	lb.	.15½	.17½
Greases, choice white, tanks	lb.	.08	—
Yellow	lb.	.07½	—
Lard, city, tubs	lb.	.10	.10⅛
Linseed, raw, bbls.	lb.	.1090	.1110
Tanks, raw	lb.	.1020	.1040
Olive, denatured, bbls., N. Y.	gal.	4.00	Nom.
Foots, bbls., N. Y.	lb.	.14½	—
Palm, Sumatra, cif. New York, tanks	lb.	.05½	—
Palm, kernel, shipment	lb.	No Prices	
Soya Bean, domestic, tanks, crude	lb.	.09	.09⅛
Stearin, oleo, bbls.	lb.	.09½	.10
Tallow, special, f.o.b. N. Y.	lb.	.07¾	—
City, ex. loose, f.o.b. N. Y.	lb.	.07⅞	—
Teaseed Oil, crude	lb.	.18¾	Nom.
Whale, refined	lb.	.0950	—



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Liquid Castile Soap Shampoo
Shampoo Base (Olive Oil & Coconut Oil)
Oil Soaps Scrubbing Soaps

KRANICH SOAP COMPANY
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SOAPS

(As of May 28, 1941)

Essential Oils

Almond, Bitter, U.S.P.	lb.	—	—
Bitter, F.F.P.A.	lb.	—	—
Sweet, cans	lb.	$1.75	$1.85
Anise, cans, U.S.P.	lb.	.78	.85
Bay, 55-60% phenols, cans	lb.	1.00	1.35
Bergamot, coppers	lb.	22.00	Nom.
Artificial	lb.	3.75	9.25
Birch Tar, rect., cans	lb.	1.60	Nom.
Crude, cans	lb.	.45	.65
Bois de Rose, Brazilian	lb.	2.25	2.40
Cayenne	lb.	—	—
Cade, cans	lb.	.60	.70
Cajeput, native, cans	lb.	.78	1.00
Calamus, cans	lb.	—	—
Camphor, Sassy, drums	lb.	.19	.22
White, drums	lb.	.20	.21
Cananga, native, cans	lb.	6.50	7.00
Rectified, cans	lb.	7.25	7.50
Caraway Seed	lb.	8.25	Nom.
Cassia, Redistilled, U.S.P.	lb.	2.35	2.55
Cedar Leaf, cans	lb.	.85	1.35
Cedar Wood, light, drums	lb.	.27	.29
Citronella, Java, drums	lb.	.48	.52
Citronella, Ceylon, drums	lb.	.50	.52
Clove, U.S.P., cans	lb.	1.15	1.25
Eucalyptus, Austl., U.S.P., cans	lb.	.68	.80
Fennel, U.S.P., cans	lb.	2.00	2.35
Geranium, African, cans	lb.	14.00	Nom.
Bourbon, cans	lb.	13.75	Nom.
Turkish	lb.	3.00	3.25
Hemlock, tins	lb.	.95	1.25
Lavender, 30-32% ester, cans	lb.	—	—
Spike, Spanish, cans	lb.	2.55	3.00
Lemon, Ital., U.S.P.	lb.	4.75	Nom.
Cal.	lb.	3.25	—
Lemongrass, native, cans	lb.	1.75	Nom.
Linaloe, Mex., cases	lb.	2.00	2.25
Nutmeg, U.S.P., cans	lb.	2.15	2.65
Orange, Sweet, W. Ind., cans	lb.	—	—
Italian cop	lb.	8.00	Nom.
Distilled	lb.	1.15	—
California, expressed	lb.	2.75	—
Origanum, cans, tech	lb.	1.50	2.45
Patchouli	lb.	5.40	6.00
Pennyroyal, dom.	lb.	2.95	3.00
Imported	lb.	2.25	2.75
Peppermint, nat., cans	lb.	3.50	3.90
Redis., U.S.P., cans	lb.	3.75	4.15
Petitgrain, S. A., cans	lb.	1.40	1.55
Pine Needle, Siberian	lb.	1.45	1.50
Rosemary, Spanish, cans	lb.	.88	.93
drums	lb.	.85	.90
Sandalwood, E. Ind., U.S.P.	lb.	4.70	5.25
Sassafras, U.S.P.	lb.	1.10	1.15
Artificial, drums	lb.	.72	—
Spearmint, U.S.P.	lb.	2.85	3.00
Thyme, red, N. F.	lb.	1.55	2.50
White, N. F.	lb.	1.65	2.75
Vetiver, Java	lb.	6.75	7.25
Ylang Ylang, Bourbon	lb.	14.00	Nom.

Aromatic Chemicals

Acetophenone, C. P.	lb.	$1.35	$1.45
Amyl Cinnamic Aldehyde	lb.	1.70	2.00
Anethol	lb.	1.10	1.15
Benzaldehyde, tech.	lb.	.45	.55
N. F. VI	lb.	.85	.95
Benzyl, Acetate	lb.	.44	.48
Alcohol	lb.	.63	.68
Citral	lb.	2.75	4.00
Citronellal	lb.	1.50	2.25
Citronellol	lb.	1.75	2.00
Citronellyl Acetate	lb.	4.00	7.00
Coumarin	lb.	2.75	3.25
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	.43	.50
Eucalyptol, U.S.P.	lb.	.80	.90
Eugenol, U.S.P.	lb.	1.75	2.00
Geraniol, Soap	lb.	.65	1.00
Other grades	lb.	1.25	2.05
Geranyl Acetate	lb.	1.20	2.50
Heliotropin	lb.	3.00	3.40
Hydroxycitronellal	lb.	2.50	2.75
Indol, C. P.	lb.	32.00	34.00
Ionone	lb.	2.75	3.95
Isoborneol	lb.	.90	1.07
Iso-bornyl acetate	lb.	.80	.95
Iso-Eugenol	lb.	2.80	4.25
Linolool	lb.	3.10	4.00
Linalyl Acetate	lb.	2.75	5.00
Menthol	lb.	3.65	4.20
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.00	2.30
Paracresol	lb.	4.50	6.00
Salicylate, U.S.P.	lb.	.35	.40
Musk Ambrette	lb.	3.75	4.20
Ketone	lb.	3.90	4.35
Xylol	lb.	1.15	1.55
Phenylacetaldehyde	lb.	4.00	4.10
Phenylacetic Acid	lb.	1.45	1.95
Phenylethyl Alcohol	lb.	2.10	2.50
Rhodinol	lb.	5.50	10.90
Safrol	lb.	1.00	1.03
Terpineol, C.P., drs.	lb.	.27	—
Cans	lb.	.30	—
Terpinyl Acetate, 25 lb. cans	lb.	.80	.85
Thymol, U.S.P.	lb.	1.50	1.60
Vanillin, U.S.P.	lb.	2.50	2.75
Yara Yara	lb.	1.45	1.50

Insecticide Materials

Insect Powder, bbls.	lb.	.23	.28
Pyrethrum Extract			
5 to 1	gal.	1.20	1.25
20 to 1	gal.	4.60	4.80
30 to 1	gal.	6.80	7.10
Derris, powder—4%	lb.	.20	.24
Derris, powder—5%	lb.	.23	.27
Cube, powder—4%	lb.	.20	.22
Cube, powder—5%	lb.	.23	.25
Squill, red, dried	lb.	.80	1.25
Phosphorus paste	lb.	.25	.62½

Waxes

Bees, white	lb.	.38	.40
African, bgs.	lb.	.29	.30½
Refined, yel.	lb.	.35	.36
Candelilla, bgs.	lb.	.22	.22½
Carnauba, No. 1, yellow	lb.	.72	.73
No. 2, N. C.	lb.	.67	.68
No. 3, Chalky	lb.	.63	.64
Ceresin, yellow	lb.	.11	.14½
Montan Wax	lb.	No Prices	
Paraffin, ref., 125-130	lb.	.0570	—

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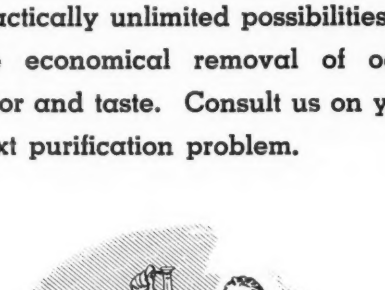

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PRODUCTION SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, Oil & Fat Industries.

Blue Mottled Soap

BLUE mottled soap is still a specialty in some soap works. The soap fat used should be of low titre such as three parts of bone grease to one of coconut oil. The soap base is boiled in the ordinary manner and grained with alkali. The soap is fitted slightly open, and should contain about 0.5 per cent of free Na_2O. It is allowed to settle for about 20 hours, and should then correspond to about 62 per cent of fatty acids and 0.1 per cent of free Na_2O. The fitted soap is pumped into a large pan and the following added to 2.25 tons of fitted soap:

	Pounds
Common salt	47
Sodium silicate, 59-60°Be.	273
Soda ash	63

The amount of water needed to bring the fatty acid content of the soap to 45 per cent is calculated, and is gradually added to the soap, kept vigorously boiling with open steam. Salt is added in crystal form, sodium silicate is warmed to 70° C. before addition, and the soda ash is made into a thick syrup with hot water. Towards the end, 18.5 lbs. of ultramarine blue, stirred up with 28 lbs. of boiling water, are run in. Water is added gradually with vigorous boiling to give a 45 per cent fatty acid content. The correct stage is reached when the boiling soap becomes very thick and heavy and portions thrown up during boiling present a rope-like appearance. With a lower or a higher water content, the consistency of the soap is thinner.

In order to reach the exact stage, a trial is made by removing a definite quantity of the soap in a ladle, adding hot water gradually from a measuring cylinder, and stirring the whole with a trowel. From time to time, a quantity of the mixture is taken out on the trowel and the surface of the batch of soap examined. At the correct point, the soap presents a dull surface. A thin skin of the soap can easily be taken out by addition of water, and the surface of the soap again becomes shining and the consistency becomes thinner. The kettle is immediately cleansed.

The soap should be allowed to cool slowly in order to produce broad mottles. Tall wooden frames are used, each of about 1,000 lbs. capacity. The temperature of the frame room should not be lower than 60° F., at least for the first 24 hours. Frames are opened after 6-8 days. Rapid cooling tends to produce a blue soap with small mottles near the center of the soap block. Prolonged heating after 24 hours causes the ultramarine to separate and settle to the bottom. Analysis of the finished soap shows:

	Per cent
Fatty anhydrides	48-50
Total Na_2O	6.8-7.2
Sodium chloride	1.0

N. G. Chatterjee. *Indian Soap J.* **7,** 144-5 (1940).

Perfume for Transparent Soap

Perfumes for transparent soap should be heavy and persistent, having a very high boiling point. Aromatic balsams and spicy perfumes are suitable. Suggested formulas are:

	Parts
1. Peru balsam	200
Tincture of benzoin	250
Coumarin	50
Vanillin	30
Oil of clove	50
Anisic aldehyde	100
Geranium, artificial	100
Narcerol Agfa	20
Musk ambrette	5
	Parts
2. Oil of clove	100
Oil of gardenia	100
Hyacinthin	30
Linalol	60
Geranium	60
	Parts
3. Tincture of benzoin	500
Liquid storax	100
Peru balsam	100
Vanillin	25
Oil of clove	50
Oil of lemon	50

A. N. Ghose. *Indian Soap J.* **7,** 146-8 (1941).

Oxidation Number of Fats

A number of determinations of the oxidizability of the steam distillate of fresh and rancid fats leads to the conclusion that this serves as a criterion of the degree of spoilage of fats. The results were expressed as "oxidation number," which means the amount in cc. of 0.01 Normal potas-

sium permanganate used for 100 cc. of steam distillate from 10 grams of fat. O. Högl, A. Flam and S. Schanzer. *Mitt. Lebensm. Hyg.* **31,** 130-8 (1940); through *Chem. Abs.*

◆

Refining Oils

Apparatus is described, and a refining process in which the oil is mixed at a temperature below 100° F. with a proportioned amount of alkali such as a 20-50° Be. caustic soda solution of such concentration as to prevent the formation of a stable emulsion. The fatty acids are thus neutralized and a mixture of oil and soap stock formed. This is delivered promptly to a centrifuge, and oil and soap stock separated before the soap stock has had a chance to stratify into soap and nigre. Benjamin H. Thurman, to Refining, Inc. U. S. Patent No. 2,226,211.

pH and Wetting

Soap is more affected by pH than is commonly supposed. At the pH of normal soap, 10.2, the wetting power is much greater than at 8.5. Below pH 9, there appears to be a marked tendency for deposition of fatty acids on the fiber, which would probably influence dyeing properties considerably. Below pH 8.5, soap is of no value as a wetting agent, although curds have not yet formed. Robt. R. Ackley. *Rayon Textile Mo.* **22,** 309-10 (1941).

◆

Oil Deodorization

Animal and vegetable oils are deodorized by passage of the oil through a deaerating zone at reduced pressure to remove all air from the oil. The oil is next heated and passed through a zone under a relatively high vacuum. Steam is sent through counter-current to the oil. In each case the oil and the volatile ingredients are withdrawn continuously from the zone. Dion K. Dean, to Foster Wheeler Corp. Canadian Patent No. 395,855.

◆

Saponin in Detergency

Saponin is useful in the textile industry because of its wetting, foaming and equalizing power. It is, however, incompatible with soap, as it raises the surface tension of a soap solution, decreasing detergent action. Saponin improves the washing action of water-soluble cellulose ethers and of sulfonation products of the fatty alcohols and of fatty-acid condensation products. It cannot be used in the presence of aliphatic alcohols, as these precipitate it. Added in a proportion of 0.5-1 per cent to benzine, saponin is an aid to benzine in dry cleaning and also diminishes the tendency of the liquid to self-ignition. Hans J. Henk. *Deutsche Parfümerie Ztg* **27,** 25 (1941).

◆

Soapless Washing Powders

As a result of German research in detergents, Germany is much better able to produce satisfactory soapless cleaning agents than during the World War. The following formula is for a soapless powder which is simply prepared, has good washing action and lathering power, and does not attack fabric or produce grayness:

Kalunit A (a derivative of naphthalene)	5-7%
Methyl cellulose	1.5-2
Calcined soda ash	30
Sodium silicate, 38° Be	10

The residual percentage composition is made up of sodium bicarbonate, sodium sulfate, and water. Hans Schremmer. *Seifensieder-Ztg.* **68,** 69-70 (1941).

◆

Fatty Acid Determination

To determine fatty acids in soaps containing bentonite or other emulsifiers, dissolve the sample of soap in 70 per cent alcohol. This prevents emulsion formation with petroleum ether when the latter is added to dissolve fatty acids. Guido Coatti. *Riv. ital. essenze profumi* **22,** 472; through *Chem. Abs.*

Victor to Erect New Building

Work has just been started on a 5-story modern building which will house offices and research laboratories at the Chicago Heights plant of Victor Chemical Works, Chicago. The new 61 x 67 foot building, which will cost approximately $165,000 with equipment, is scheduled for completion in September. The company now has twenty-five buildings on its 10-acre site at Chicago Heights, and the new building represents another step in a general expansion program which is taking place at the company's three plants. The other two plants are at Nashville and Mount Pleasant, Tennessee.

Toilet Soap Gloss

IN modern milling equipment for toilet soap, the rapidity with which the mass is fully milled and pressed out as tablets results in minimum loss of perfume from the large exposed mass. Tests are made before and after treatment, particularly when a fresh perfume is being applied, to note what slight loss is being sustained.

The temperature at which the nozzle which extrudes the bar prior to stamping, varies from 40 to 60°C., according to the base, to impart the required glossy finish to the soap. An attempt to introduce electric resistance heating by surrounding the inner section of the nozzle with nickel-chrome elements did not meet with the desired results, since, although clean and efficient, the slight vibrations caused by continuous working loosened these elements from their housings, whereby the ultimate temperature imparted was vitiated. Gas heating was reverted to but with an improved type of miniature burner which was linked up with automatic temperature control. Before this was put into practice, an unnecessary though small loss of perfume was experienced and the finish was not always perfect.

Different sizes of soap bars extruded to suit the size of the ultimate tablets, necessitate inserting different plates and dies. The latest of these are specially chrome-plated to give the aperture every opportunity to remain in true shape. One system of maintaining the aperture in this strictly smooth condition was to rub it periodically with emery paper or other abrasive medium, but the latest practice is to have a small pronged tool which is thrust within the space to clean out adhering matter.

Samples of the final tablets are taken periodically and inspected for consistency of the glossy finish, apart from the usual checking of the thoroughness of the milling and chemical composition. Testing of gloss of the freshly stamped tablets and of those which have been stored for some time is done in a reflectometer similar to that employed in modern face powder inspection. The sample tablet is placed in line with a lamp, while two rectifier-type of photoelectric cells are placed so that they receive the reflected light at an angle of 45 degrees from one of the surfaces. These are connected in series, with a galvanometer connected across them to indicate by the deflection of a needle when one cell generates a greater current than the other. Further manipulation of the light is made with a compensating shutter. By comparing the sample with standard soap tablets, the glossiness of the finish is recorded in definite degrees on a calibrated scale. *Perfumery & Essential Oil Record* **32**, 25-7 (1941).

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Test "Soap"-Concrete Mixture

Michigan State Highway Department, Lansing, Mich., is at present experimenting with the use of various mixtures of detergent materials and concrete as a possible means of preventing pavement scaling caused by the application of chemicals to remove ice. A material now under test is a sulfated fatty alcohol containing product known as "Orvus," a soap-like wetting agent in paste form manufactured by Procter & Gamble Co., Cincinnati. This is dissolved in water and added to the concrete ingredients as they enter the mixer. The required amount of "Orvus" per barrel of cement depends on the type of materials used in making the concrete and must be determined from laboratory experimentation. According to a communication from J. W. Kushing, research engineer of the State Highway Department, the approximate amount of paste required per barrel of cement is between 0.02 and 0.10 pound. The quantity of "Orvus" shall be such as will produce a drop in weight per cubic foot of concrete of 4 to 6 pounds as compared with concrete of the same consistency and cement content without the addition of "Orvus." Various types of mixtures are being tested out on a construction project known as the Michigan Test Road, a 22-foot concrete pavement almost 18 miles in length. Some 7.6 miles are devoted to the durability study of concrete. Results of the durability studies have not yet been released but will be in the near future, it is said.

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Binary Mixtures of Soaps

Phase rule studies of binary mixtures of anhydrous sodium soaps (laurate-palmitate, laurate-stearate, palmitate-stearate, palmitate-behenate, and oleate-stearate), show that the following forms of a single pure anhydrous sodium soap of a normal fatty acid can occur between room temperature and the melted liquid: Crystals, of which there is more than one kind—subway, waxy, superwaxy, subneat, neat, and ordinary liquid. All are stable phases, most or all of which occur successively on warming. The superwaxy phase, which has not been previously described, is dark and doubly refracting. Portions of the phase rule diagrams were determined for the above binary mixtures. Neat soap is absent in sodium oleate and in sodium behenate. Marjorie J. Vold. *J. Am. Chem. Soc.* **63**, 160-8 (1941).

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Enzymes as Soap Substitutes

Enzymes have been used to save soap where fats are scarce. The enzymes, obtained from extracts from the pancreas and liver, act by breaking up and rendering soluble protein and fat materials in soil. Parallel tests in the laundry in which one series used a commercial enzyme preparation with soap and calcined soda, the other soap and soda only, showed that an appreciable saving in soap can be made. For 60 kg. of dry wash in the one case, 600 grams of enzyme preparation, 400 grams of 80 per cent soap chips, and 300 grams of calcined soda were used;

in the other case a total of 630 grams of soap chips and 720 grams of calcined soda were used. In the first case the enzyme material was used in the break in lukewarm water, in the second case calcined soda was used in the break. Only one suds with soap and soda was needed after the enzyme break. When soda was used for the break, 3 suds were used, with soda added in the first two. Several rinses followed. The use of the enzyme preparation therefore not only saved soap, but steam and resulted in a simplified washing procedure. A. Zscharn. *Fette und Seifen* **47,** 463-4 (1940).

Inhibiting Rancidity

Chemical changes that result in the formation of gum in mineral oils and rancidity in animal and vegetable oils are inhibited by introducing into the oil an appropriate quantity of the aqueous layer that arises during the acidification which causes the separation of an oily layer from the waste alkaline wash liquors employed in the refining of petroleum distillates. Trinidad Leaseholds Ltd., E. Hene and A. G. V. Berry. British Patent No. 513,105.

Licuri Wax and Oil

Wax from the leaves of *Cocos coronata*, from North and East Brazil, has d_4^{15} 1.010, melting point 84.5° C., acid value 12.02, saponification value 109.2, ester value 98.18, and Hanus iodine value 15.2. The wax is more soluble in organic solvents than is carnauba wax, which it otherwise resembles and for which it is a suitable substitute. Licuri oil from the nuts resembles coconut oil and babassu oil, and has d_4^{15} 0.92, n_{15} 1.4596, melting point 21° C., freezing point 17.5° C., acid value 4.7, saponification value 257.7 and ester value 253.0. The oil can be used in margarine and soap manufacture. For the latter it is more economical than babassu oil. Moacyr Silva. *Rev. Chim. Ind.* (Rio de Janeiro) **9,** 82-5; through *Chem. Abs.*

Textile Mildew Prevention

The question of impregnating textiles to make them germicidal is of increasing interest from a number of points of view. Preservation against mildew has been attempted by impregnating fabric with a number of fungicidal chemicals. A number of mold inhibitors such as zinc chloride, mercuric chloride, sodium fluoride, etc. possess practical disadvantages. Zinc chloride is both soluble and hydroscopic, adsorbing moisture. Mercuric chloride is also soluble and readily washed out of fabric. Many phenolic compounds high in germicidal and fungicidal properties are very soluble in water and may have an objectionable odor.

Salicylanilide, sold under the name of Shirlan, has been found to preserve cotton against mildew when present to the extent of only 0.01 per cent of the fiber weight. The compound is colorless, odorless and non-poisonous, and in the free state only slightly soluble in water. It may be applied as a suspension in water or as a solution of the soluble sodium salt. The success of salicylanilide is largely due to its practical applicability for textile use. Many far more potent germicides are known for the purpose, such as trichlorophenol, *para* - acetoxy mercuri - acetanilide, chloromercuri - *ortho* - phenol, and phenol mercury nitrate—but the cost of these is likely to check their widespread use.

Phenyl mercury nitrate is a particularly strong fungicide. It is used in a concentration of 1:20,000 for treating ringworm or athlete's foot, and is non-poisonous. Its application to textiles is limited by the fact that it does not dissolve in organic solvents nor lend itself to dispersion in water. The compound is stable and does not decompose under heat as some mercurials do.

Di - mercuri - chloronaphthylamine, apart from its cost, appears to combine high fungicidal power with solubility in solvents and dispersibility in emulsions, but has a slight odor. One part of this compound will protect 5,000 parts by weight of fabric. *Manufacturing Chemist;* through *Textile Colorist* 63, 198 (1941).

Fatty Acid Fractionation

A vacuum still is illustrated and described by means of which a fatty acid mixture can be analyzed by methyl ester fractionation. Sharp separation is obtainable between adjacent homologous fatty acid esters. A. W. Weitkamp and L. C. Brunstrum. *Oil & Soap,* **18,** 4750 (1941).

Continuous Oil Refining

Fatty oils of all types can be refined by refrigerating to a temperature materially below room temperature without solidifying, so that a refining agent can be mixed with it, such as caustic soda solution. The refining agent should be such as to combine with the impurities to form foots. In this process the oil flows along a passage of small cross section in which is a mixing zone. A stream of refining agent is added and mixed with the oil here to form a mixture of oil and foots which continues its flow along the passage. At one stage the passage is refrigerated to precipitate solids. At a subsequent zone the passage is heated to facilitate separation of the oil-foots mixture. The refined oil is then separated from the foots. H. M. Stadt, to Refining, Inc. U. S. Patent No. 2,223,077.

Fatty Alcohol Phosphate

Fatty alcohol pyrophosphates are found to make much better detergents than fatty alcohol sulfates, and may be prepared as follows: 400 grams of coconut fatty alcohol, largely lauryl alcohol, are warmed to 90° C. and stirred with 180 grams of pyrophosphoric acid, also warmed to 90° C. The temperature rises to about 110° C., a sirupy mass forming. This is stirred with cooling, into 80 grams of caustic soda dissolved in 300 cc. of water, and neutralized. The yellowish paste is almost completely alcohol-soluble. The recrystallized dried product contains 64 per cent of fatty alcohol. German Patent No. 686,241; through *Fette und Seifen* **47,** 466 (1940).

PRODUCTS AND PROCESSES

Flexible Sheet Soap

A flexible, water-soluble sheet form of detergent material contains a soap such as "Ivory" or "Jap Rose" together with an admixture of about 10 per cent or more of a hydrophilic polymerized vinyl compound such as polymerized vinyl alcohol or its acetate ester. Charles S. Rowe, to E. I. du Pont de Nemours & Co. U. S. Patent No. 2,226,075.

Sulfonated Alcohols

A water-soluble product suitable for use as a cleansing and emulsifying agent consists of a sulfonation product of a mixture of alcohols obtainable by hydrogenating products from the destructive oxidation of difficultly volatile aliphatic hydrocarbons, such as those of paraffin or paraffin oil. A gaseous oxidizing agent containing free oxygen is used as oxidant. Martin Luther and Wilhelm Dietrich, to Jasco, Inc. U. S. Patent No. 2,227,659.

Soap Nut as Detergent

Soap nut, *Sapindus mukorossi*, which contains 17 per cent of extractable saponin, plus gums and resins, appears to be a good detergent for the textile industry, possibly having some sizing effect. The pH value of a 2 per cent bath is 3.99. A solution of soap nut powder showed a greater lowering of interfacial tension against benzene than did a solution of sodium oleate, but had less suspending power for oiled umber than the sodium oleate solution. Comparison of the efficiency of soap nut powder and soap, each used under its own optimum conditions, showed the soap nut powder to be the more efficient detergent after one and after five washes, as measured in terms of the brightness of the washed samples. A drawback in the use of soap nut powder by the textile industry is that it gives a yellow cast to bleached cotton and woolen fabrics, especially when the powder is prepared from roasted pericarp. J. L. Sarin and M. Y. Uppal. *Ind. Eng. Chem.* **33**, 666-8 (1941).

Soap from Sardine Oil

Soap is made by hydrolyzing a marine oil such as sardine oil, to produce a fatty acid mixture. This is fractionally distilled to produce a C_{18} fraction containing less than 3 per cent of C_{20} and C_{22} fatty acids. The fraction obtained is subjected to hydrogenation and is then saponified. Ralph H. Potts and John E. McKee, to Armour & Co. U. S. Patent No. 2,224,985.

Germidical Detergent

A liquid detergent which is also a germicide suitable for sterilizing articles immersed in it contains about 4 parts of formaldehyde, 6 parts of water and 15 parts of a mixture of methyl alcohol and acetone, containing from half as much to twice as much methyl alcohol as acetone. Arthur L. Waugh. U. S. Patent No. 2,224,889.

Coal-Tar Detergents

A fraction of coal-tar oil boiling at 200-450° C. is treated in liquid sulfur dioxide solution with a sulfonating agent. The desired sulfonation is completed at a low temperature, suitable at —5° C., and the reaction mass neutralized, suitably with caustic soda, to produce detergents. Robert L. Brandt and John Ross, to Colgate-Palmolive-Peet Co. U. S. Patent No. 2,227,999.

Cleaning Oil Tanks

To clean containers which have held heavy mineral oil, it is recommended in British Patent No. 520,413 to heat with hot air or superheated steam, then spray with a fine mist of alkaline cleaning solution forced into the container with superheated steam. The resulting oil emulsion is rinsed off the walls with jets of boiling water. Sodium metasilicate is claimed to be particularly applicable, since it does not etch the metal, as stronger alkalies might.

Sulfamic Acid Cleanser

Calcareous deposits can be cleaned from boiler tubes, walls, dairy equipment and oil wells, by use of sulfamic acid as cleaning agent. Elmer K. Bolton and James K. Hunt, to E. I. du Pont de Nemours & Co. U. S. Patent No. 2,225,294.

Soap from Black Liquor

A crude tall-oil soap mixture consisting of soaps of resin and fatty acids, saponifiable constituents, and impurities including lignin, is separated from black liquor. The mixture is mixed with alkali and heated until the saponifiable constituents are completely saponified. Impurities are separated from the soaps by centrifuging. A. T. Scott and C. R. Brown, to The Sharples Corp. U. S. Patent No. 2,227,203.

White Shoe Cream

A white shoe cream contains 10 parts of paraffin, 50-52° C., 3 parts of carnauba wax, 1 of ozokerite, white, 2 parts of bleached beeswax, and 40 parts of terpentine or half terpentine and half turpentine substitute. *Seifensieder-Ztg.* **68**, 50 (1941).

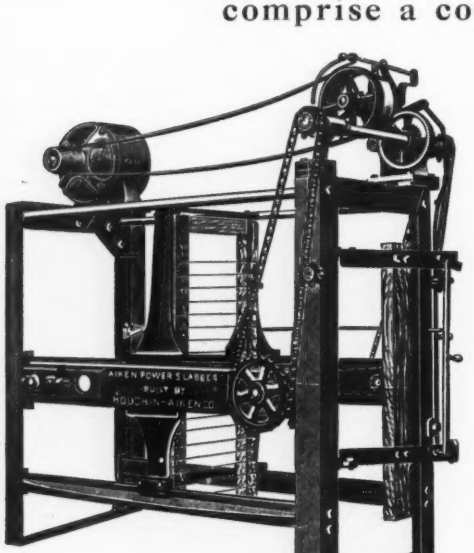
CAUSTIC DEVELOPMENTS

Improvements in caustic soda, its quality, purity, ease of handling, and in its other characteristics as a prime raw material for the soap manufacturer, have been greater during the past twenty years than in the preceding years since the discovery of a commercial method of manufacture. Watch for an article on this vital subject by Jack Leppart, of Columbia Chemical, in the July issue of SOAP & SANITARY CHEMICALS.

TWO HOUCHIN CUTTING MACHINES

PREFERRED BY LEADING SOAP MANUFACTURERS

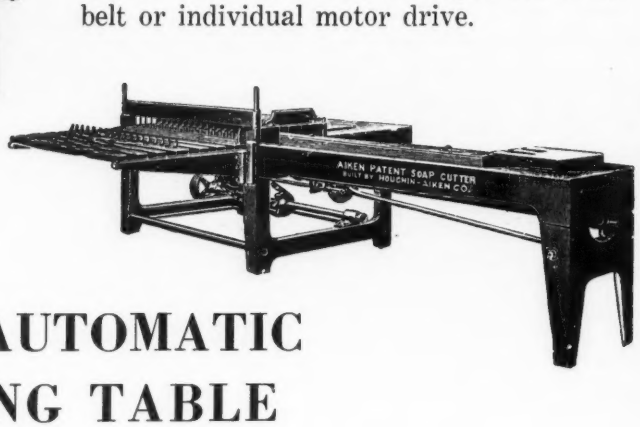
Installed together these two soap machines comprise a complete cutting outfit.



HOUCHIN AUTOMATIC POWER SLABBER

slabs the soap, ejects the slabbed frame and returns head to slabbing position to receive the next frame.

Every part of this machine is constructed of iron or steel, and is arranged for either belt or individual motor drive.



THE HOUCHIN AUTOMATIC POWER CUTTING TABLE

will cut soap for oblong, oval or octagon cakes. Heads containing the cutting wires are easily removed when it is desired to change the size or shape of the cakes. Capacity 60 to 100 frames of soap per day.

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Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 2,236,828, Dental Cream, patented April 1, 1941 by Fred W. Muncie, New Brunswick, N. J., assignor to Colgate-Palmolie-Peet Co., Jersey City, N. J. A dental cream that contains, as an essential ingredient, a salt of the sulphuric acid ester of a fatty acid monoglyceride and that also contains a polishing agent and a flavoring material.

No. 2,237,356, Insecticide, patented April 8, 1941 by David R. Merrill, Long Beach, Calif., assignor to Union Oil Company of California, Los Angeles. An insecticide comprising a lower alkyl ester of 3-isopropyl 6-methyl 3, 6-endoethylene Δ 4-tetrahydro-phthalic acid.

No. 2,237,629, Shampoo, patented April 8, 1941 by John W. Orelup, Summit, N. J. An improved shampoo, containing as the active ingredient a water soluble salt of the sulphonic esters of monoethanolamide of the cocoanut fatty acids in an aqueous vehicle, said ingredient being characterized by high foaming power due to the absence of formation of lime or other insoluble salts, the property of remaining liquid in concentrated solution, high detergent value, and the property of being non-injurious to the scalp or hair due to low imbibation and the absence of the formation of free alkali.

No. 2,239,079, Insecticide Composition, patented April 22, 1941, by Gerald H. Coleman and Clarence L. Moyle, Midland, Mich., assignor to Dow Chemical Co., Midland, Mich. An insecticidal spray comprising a non-corrosive organic solvent having dissolved therein a product selected from the class consisting of the extracts of pyrethrin- and rotenone-bearing plants, and as an active toxicant and stabilizer a halo-phenoxy-alkyl-thiocyanate.

No. 2,239,131, Soap Stock Purification, patented April 22, 1941, by Benjamin H. Thurman, Bronxville, N. Y., assignor to Refining, Inc., Reno, Nev. The process of purifying soap stock from the alkali refining of vegetable and animal oils containing proteins and other unsaponifiable impurities, which comprises, the step of heating said soap stock under conditions which substantially prevent local overheating to a temperature sufficiently high to break at least a portion of said proteins and other impurities into simpler compounds capable of being removed from said soap stock as vapors, maintaining said soap stock during heating to high temperature under sufficient conditions of movement to prevent local overheating and burning of said impurities, removing said vapors to form a purified soap product, and cooling said product before the same is damaged by said temperature.

No. 2,239,832, Insecticide, patented April 29, 1941, by Lloyd E. Smith, Washington, D. C., assignor to Henry A. Wallace, Secretary of Agriculture of the United States of America, and his successors in office. An insecticide containing as its essential active ingredient p-aminacetanilide. An insecticide containing as its essential active ingredient m-aminoacetanilide. An insecticide containing as its essential active ingredient o-aminoacetanilide.

Purifying Soap Fats

Fats, before being converted to soap stock, may be purified as follows: The neutral fat is heated in a clean kettle with 10 per cent of a 10 per cent salt solution, to about 90° C. After moderating the heat, it is next stirred with 3 per cent of 36° Be. caustic soda solution, after which 2 per cent of finely seived salt is scattered over the mass. The fat is allowed to simmer for 20 minutes, the heat is then removed, and the mass allowed to stand overnight. The emulsion which first forms breaks, and carries impurities to the bottom. The thin surface layer of foam is removed and the fat carefully separated from the watery layer on the bottom. *Seifensieder-Ztg.* **68,** 84 (1941).

Fat Spoilage Determinations

In determining the peroxide value of fats, the titration figure should be kept below 10 cc. of 0.002 Molar sodium thiosulfate solution to give values within 5 per cent of the correct amount. Any method for determining ketones in oxidized fat which employs steam distillation for their removal must be empirical, in which the conditions of distillation have to be standardized. Under such conditions reproducible results useful for purposes of comparison can be obtained. Determination of oxidized acids insoluble in petroleum spirit may be of value in special circumstances when the more usual chemical tests break down, as when free oxygen present in a sealed container has been absorbed, or when volatile or heat-labile oxidation products have been removed. N. N. Dastur and C. H. Lea. *Analyst* **66,** 90-98 (1941).

Sulfonated Fish Oils

Fish oils rich in higher alcohols are sulfonated at a low temperature and the product saponified with caustic alkali. It is then diluted with water to separate it into a water-insoluble waxy layer and a clear aqueous solution. In this way the higher alcohols and sulfonated fatty acids are separated in one process. O. Inoue and R. Haneta. Japanese Patent No. 137,699; through Chem. Abs.

Sanitary Equipment Cleanser

Cleaning material for sanitary equipment contains soap, powdered stone, chalk, a volatile oil, alkalies, alcohol and water. Calcium oxide can be used in place of chalk and soda ash in place of caustic soda. Georg Badstuber-Eichler. Swiss Patent No. 205.101.

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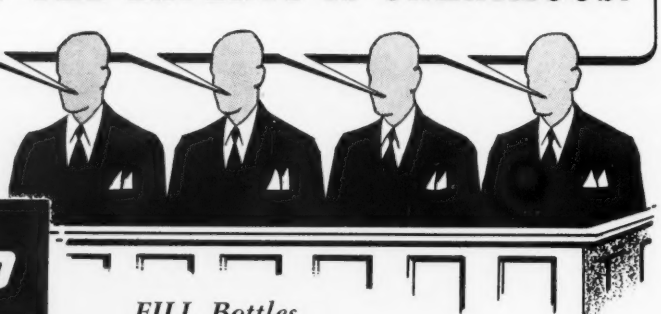

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NEW EQUIPMENT

IF YOU want additional information on any of the items described below or if you want any of the bulletins, catalogs, etc., write to the MacNair-Dorland Co., Inc., 254 West 31st St., New York, mentioning the number of the item.

817—Corrosion Resistance

"Tygon" corrosion-resistant paint and "Tygon" corrosion-resistant tank linings are described in a new bulletin just issued by U. S. Stoneware Co., New York. "Tygon," a modified halide polymer, available either in highly plasticized form or in liquid form, is said to be unaffected by practically all inorganic and organic acids, salt solutions and alkalies, with the exception of glacial acetic and fuming nitric acids, and is unaffected by active oxidizing agents and many of the hydrocarbons. "Tygon" paint comes in a wide range of colors and is recommended by the company for use wherever a highly corrosion resistant paint is needed.

818—Explosion Proof Pump

A new midget size explosion proof centrifugal pump, model "D," has just been announced by Eastern Engineering Co., New Haven, Conn., for use in industrial, pilot plants, laboratory and experimental applications where an explosion proof unit is necessary. Main features are compact construction, capacity for continuous duty, high performance characteristics and approval of underwriters. Weighing only 18 pounds, the pump measures 10″ in length, 5½″ in height and 5″ in width. Motor develops 1/12 H.P. and has a speed of 3450 R.P.M.

819—Essential Oils List

Fritzsche Bros., Inc., New York, has just brought out its new price list of essential oils, aromatic chemicals, fixatives, balsams, gums and resins, for distribution throughout the trade.

820—Filling Machine

A new bulletin on the "Universal" Filling Machine, versatile filling unit of Stokes & Smith Co., Philadelphia, is now being distributed. Illustrated with the many types of products and containers to which the unit is adaptable, the folder gives details and specifications of the filler which is said to be capable of filling packages of ¼ oz. to 5 lbs. in capacity at speeds ranging from 30 to 60 packages per minute or more. The "Universal" is equipped with three metering devices and incorporates a packing mechanism to compress materials into packages.

821—Condensation Eliminator

A spray-on plastic compound, "Insulmat No. 595," a recent development of J. W. Mortell Co., Kankakee, Ill., which is said to eliminate condensation drip from ceiling and side walls of freight cars, storage houses, cargo ships, etc., has just been put on the market. Designed to prevent damage from sweating or dripping water on raw materials and other merchandise, the product is described as self-bonding, requiring no priming coat, adhesives or supports, and applicable to any metal surface.

822—American Essential Oils

Articles on "U. S. Grown Scents," "Soap Output Boosted by Defense" and on future applications of electrochemistry are featured in the current issue of the *Pioneer*, monthly magazine of Niagara Alkali Co. and Electro Bleaching Gas Co., New York.

823—New Compound Dispenser

Wm. M. Britton Co., Los Angeles, is now offering a dishwashing compound dispenser that can be attached to the top of washing machines. The company has also redesigned its inside-type dispenser, simplifying construction and reducing cost. Both dispensers are described as chromium plated and equipped with copper tubing and fittings.

824—New Soap Antioxidants

Several articles of direct interest to soapers are featured in the May issue of the *Givaudanian*, house organ of Givaudan-Delawanna, Inc., New York. "New Soap Antioxidants" are described in one article, while the improvement of a disinfectant base through the addition of coconut oil soap is the subject of another. The factors behind recent price advances of essential oils are also discussed showing how rumors and speculation push prices to higher levels.

DCAT Schedules Skytop Meeting

The 6th Annual Fall Meeting and Golf Tournament of the Drug, Chemical and Allied Trades Section of the New York Board of Trade, will be held at the Skytop Club, Skytop, Pa., October 23-26. A program committee consisting of J. P. Remensnyder, S. B. Penick, Jr., and John C. Ostrom, secretary of the section, has been appointed by chairman John J. Toohy to select speakers for the meeting.

ASTM To Meet in Chicago

More than 115 separate technical papers and committee reports will be presented at the forty-fourth annual meeting of the American Society for Testing Materials to be held June 23 to 27, inclusive, at the Palmer House, Chicago. Seventeen sessions have been arranged. At the eleventh session, to be held June 26 at 9:30 a.m., Harry P. Trevithick, of the New York Produce Exchange, chairman of Committee D-12, will present a report summarizing the work carried on by the subcommittees on soaps and detergents. See *Soap & Sanitary Chemicals*, April, 1941.

SOAP MILLS OF LARGE PRODUCTION

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Soap Flake Milling. The No. 912SA FIVE ROLL LEHMANN SOAP MILL (here illustrated) is a machine of large production and will give an exceptionally thin flake of uniform character and brilliant transparent appearance.

Toilet Soap Milling. LEHMANN FIVE ROLL MILLS can be arranged for automatic one operation milling. They produce the largest possible output of finest milled soap with efficient mixing. If desired the feed hopper can be arranged with two milling lanes. Can also be furnished with a *built-in intermediate plodder.*

Detailed specifications will be furnished upon request.

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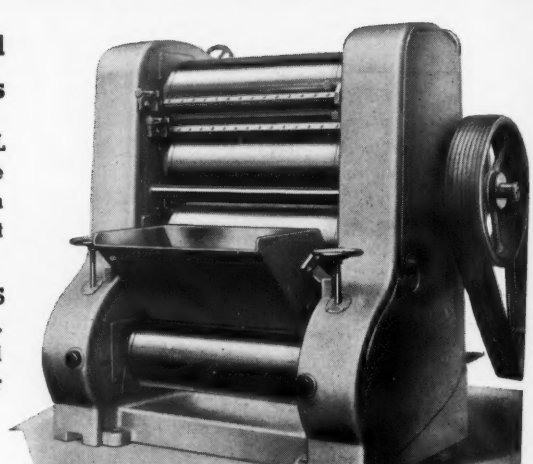

• **LEHMANN NO. 924SA FOUR ROLL SOAP MILL** corresponds in detail and operating features to the No. 912SA Five Roll machine shown above. It is useful for pre-milling or operating in tandem with the five-roll machine.

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Stain Removal

The laundry manager should have on hand a 1 per cent sodium hypochlorite bleach diluted to one-quarter per cent for use on stains cold, a stock soap tank, and alkali, in addition to the following:

1. A reducing bleach or stripper of sodium hydrosulfite made up fresh just before use.

2. An oxidizing bleach for silks and woolens of 3 per cent hydrogen peroxide, or sodium perborate solution.

3. A fat solvent such as carbon tetrachloride.

4. A wet-dry soap solution: to prepare this, dissolve 1 pound of potash-olive oil soap in 1 quart of alcohol, and add 1 quart of benzol.

5. Rust-spot remover of oxalic acid solution or of an acid fluoride.

A chart of recommended treatments for over 70 types of commonly occurring stains is given. *The Laundryman* **7,** No. 3, 12-13, 16 (1941).

Fractionation of Fatty Acids

Apparatus is described making use of a process for distilling fatty acid material. A mixture of the fatty acids is passed through a tube subjected to a temperature high enough to heat the acids and to vaporize fatty acids in a portion of the tube where the acids absorb heat. The vaporized fatty acids are passed up through heat-exchange zones of condensed fatty acids having successively lower boiling points, against a countercurrent of reflux liquid. A condition of substantially reduced pressure is maintained which extends through the zones and at least to the vaporization portion of the tube. Ralph H. Potts and John E. McKee, to Armour & Co. U. S. Patent No. 2,224,926.

Extraction of Unsaponifiables

To remove unsaponifiable matter from alcoholic soap solution, the soap from 40 grams of fat is extracted for 6 hours with 250 cc. of benzine. Extraction of hydrocarbons is practically complete, and over 90 per cent of the sterols are extracted. The method is simple and saving of benzine. The oleic-hydrocarbon values of several fats were: butter fat 0.02, lard 0, beef fat 0.01, hardened whale oil 0.01, and olive oil 0.56. J. Grossfeld. *Z. Untersuch. Lebensm.* **80,** 434-9; through *Chem. Abs.*

Germicidal Bottle Washing

Caustic soda is the most germicidal of all alkalies used in bottle-washing solutions. To determine the sterilizing power of a cleaning solution it is necessary to determine the total caustic soda content as well as the alkalinity. The use of aluminum bottle labels complicates the bottle-washing operation in that aluminum reacts with the caustic to form sodium aluminate, thus reducing the strength of the alkali. By using the indicator, sodium indigo disulfonate, the presence of sodium aluminate causes no appreciable error in titration. In mixtures containing caustic soda, soda ash and trisodium phosphate, the value obtained is lower by about 1/8 per cent, than with tropeolin-O as indicator. C. A. Shillinglaw and Max Levine. *Proc. 1st Food Conf. Inst. Food Tech.* **1,** 59-75; through *Chem. Abs.*

Auto-oxidation Prevention

Esters of gallic acid are added to fats and oils to prevent their auto-oxidation. Theodor Sabalitschka. Hungarian Patent No. 124,996; through *Chem. Abs.*

Fat Refining

Animal and vegetable oils and fats are purified and refined by removing colloidal or dissolved metals in the form of chlorides. About 0.5-2 per cent by weight of concentrated hydrochloric acid is added to the fat with stirring, the acid reacting with the fat to form a precipitate of chlorides with the metals present. Water is then added in the proportion of 10 parts to 1 part of hydrochloric acid, with stirring. The mixture is allowed to stand for a sufficient length of time for the precipitate to settle, after which it is separated from the fat. J. L. Jakobsen, to General Mills, Inc. Canadian Patent No. 394,979.

Analysis of Detergents

Various wetting agents and detergents can be differentiated from one another qualitatively by a number of tests. For convenience the materials studied were divided into eight classes: (1) soaps, (2) sulfonated oils such as monopole oil, (3) highly sulfonated oils such as Avirol, (4) naphthalene sulfo acids such as Nekal, (5) fatty alcohol sulfates such as Gardinol, (6) fatty acid condensation products such as Igepon, (7) protein fatty acid condensation products such as Lamepon, and (8) ethylene oxide condensation products such as Igepal.

To test these, 2 or 3 drops or an equivalent quantity of solid are dissolved in 1 cc. of distilled water.

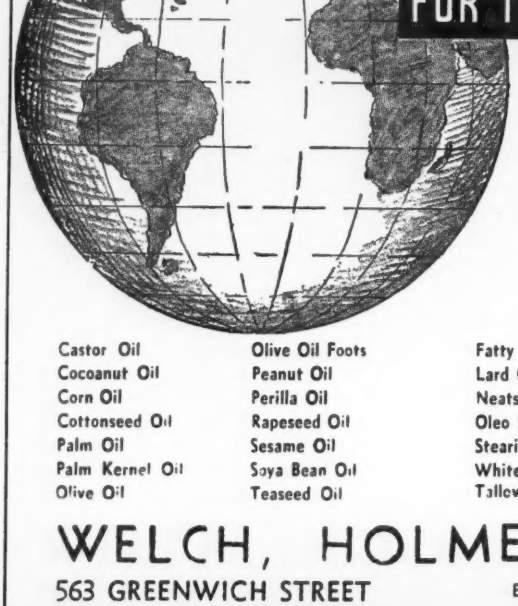
Test A. Boil with 3 cc. of 5 per cent acetic acid and also boil a separate sample with 10 cc. of water of 20 degrees of hardness. A precipitate indicates sample (1) or (2) above. Extract a sample of the original material with alcohol, filter, and evaporate and ash the filtrate. Sample (2) yields sulfate in the ash.

B. Treat with 1 drop of concentrated hydrochloric acid. Samples (3) and (7) show turbidity. Only sample (7) gives the biuret reaction.

C. Boil for a minute or two with 5 cc. of concentrated hydrochloric acid. Cool and dilute to 10 cc. Samples (4) and (5) show strong turbidity. Only sample (4) gives a precipitate with copper sulfate solution. Samples (6) and (8) are unaffected by the above tests. Sample (6) gives a test for nitrogen and shows sulfate in the ash. Sample (8) yields no ash. K. Linsenmeyer. *Melliand Textilber.* **21,** 468-9; through *Chem. Abs.*

Splitting Wool Fat

Wool fat consists of esters of higher alcohols, — cholesterol, isocholesterol, ceryl, lanolin, cetyl and other alcohols, with fatty acids, chiefly palmitic, cerotic, stearic, myristic, valerianic. Since the fatty acids are useful for soap making, and the alcohols for similar purposes, it is advantageous to split the wool fat rather than to use it as the neutral product.



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Cottonseed Oil	Rapeseed Oil	Oleo Stearine	Soda Ash	Tri Sodium Phosphate
Palm Oil	Sesame Oil	Stearic Acid	Caustic Potash	Di Sodium Phosphate
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NEW PROCTOR *Flake Soap* SYSTEM

The crude wool fat is saponified with concentrated caustic potash or caustic soda under pressure, having first been rendered anhydrous at not too high a temperature. The mixture of soap and alcohols obtained is distilled under vacuum with steam at 220° C. up to 280° C. After the alcohols have distilled over, the soap is extracted with dilute alcohol or with water. Thereafter the usual methods of purification are applied. C. H. Kentgen. *Chemiker-Z.* **1940,** 409-11; through *Deutsche Parfümerie-Z.* **26,** 222-3 (1940).

Soap Effect on Skin

Calcium or magnesium soaps or their mixtures, formed by toilet soaps in hard water, do not irritate the normal skin. Sulfonated oil leaves an oily residue in hard water, and sulfonated alcohol a slight residue. Patch tests with these residues gave negative results. Proper washing of the skin with soap makes the use of soap substitutes unnecessary. Howard J. Parkhurst. *Arch. Dermatol. Syphilol.* **43,** 299-310 (1941); through *Chem. Abs.*

Oil Refining

Cottonseed or corn oil containing gums and free fatty acids are refined by adding a similar oil having a different gum content to adjust the gum content of the oil to an amount which will cause the soap stock produced in the process to separate cleanly from the refined oil with a minimum entrainment of neutral oil in the soap stock. An alkaline refining reagent is added to the oil in which the gum content has been adjusted, to form a mixture of soap stock and refined oil. Oil and soap stock are then separated. Howard M. Duvall, Jr., to Refining, Inc. U. S. Patent No. 2,225,557.

Rancidity Inhibition

Development of rancidity in vegetable oils and soaps is inhibited by admixture with 0.01-1 per cent of *N*-phenylthiourethane or some closely related compound. George D. Martin, to Monsanto Chemical Co. U. S. Patent No. 2,225,124.

New Fatty Acid Uses

A scientific development in the oil and fat industry is the use of fatty acids as starting material for the production of a series of aliphatic compounds heretofore unknown or not commercially available. This work has resulted in the production of fatty alcohols, amides, ketones, amines, and many other derivatives formerly of academic interest only. Many resinous materials, synthetic varnishes, wetting and emulsifying agents, insecticides, and other materials have been prepared from fatty acids, and interest in these is rapidly increasing.

Most of the general synthetic reactions now applied to coal tar derivatives can be applied to aliphatic materials, and realization of this fact has served to stimulate progress in this field. Most of the compounds derived from the fatty acids are characterized by the presence of the long-chain alkyl group, many of the properties being dependent on the presence of one or more of these groups.

Examples of new products are dialkyl ketones, which are wax-like solids useful as wax substitutes in polishing and cleaning compositions, and as chemical intermediates for the production of numerous compounds. A further example is that of the aliphatic amines, useful as starting materials for the preparation of detergents and surface-active compounds in general. Dioctylamine is an excellent insecticide and appears to be a substitute for pyrethrum. A. W. Ralston. *Chem. & Met. Engineering* **48,** Feb. 126-9 (1941).

Refining Synthetic Glycerine

Synthetic glycerine, produced by hydrogenation processes, is highly impure, so that the isolation of C.P. or U.S.P. grades has proved extremely difficult. However, crystallization in the presence of suitable solvents readily yields glycerine of any required degree of purity. Of thirty solvents investigated for the purpose, 1-butanol was found to be the best. As a result of this process it is now possible to produce by a simple one-step treatment with hydrogen any desired quantity of high-quality glycerine from abundant carbohydrate materials such as starch and dextrose. H. B. Hass and J. A. Patterson. *Ind. Eng. Chem.* **33,** 615-6 (1941).

Castor Fatty Acids

In the modern method of fat splitting and fatty acid distillation, castor-oil fatty acids form anhydrides which do not react in the determination of acid value, so that this figure is not an indication of the extent of splitting. This can only be determined satisfactorily by measuring the amount of glycerine liberated from a sample of the acids by saponification. Castor-oil fatty acids are likely to be used to an increasing extent in the production of soda soft soaps, just as during the last war. *Perfumery & Essen. Oil Record* **31,** 360 (1940).

Carbonyl Number

Carbonyl number is suggested as a constant to characterize oxidized fats. It is the number of milligrams of carbonyl, C=O, in 1 gram of fat or fatty acid. Hydroxylamine chlorohydrate was used in the presence of pyridine to change carbonyl compounds to oximes. The hydrochloric acid set free was titrated. The method is a rather difficult one. Change in the carbonyl number is shown during the storage of the following natural fats:

	Days Kept				
	Carbonyl Number				
Fat	*Fresh*	10	22	52	80
Coconut oil ...	0.7	1.7	1.9	3.5	3.6
Palm kernel oil	0.7	1.9	2.7	4.2	16.5
Peanut oil	0.2	2.1	2.1	3.9	5.5
Soybean oil ...	0	1.8	1.9	4.5	7.5

Hydroxyl number should also be determined in studying oxidative changes. Further work needs to be done on the use of carbonyl number. H. P. Kaufmann and Fu-Ying Liu. *Fette und Seifen* **47,** 506-10 (1940).

Washing Powder

The residue from saccharification of starchy materials by barley malt is dried and powdered, then compounded with powdered soap or other detergents. Isamu Tunoda. Japanese Patent No. 128,759.

Measure of Detergency

In a new approach to the measurement of detergent action, the amount of dirt taken up by fiber or some other solid is compared in the presence and absence of the test detergent. In order to reduce the study of this factor to its simplest terms only three substances are used,—a solid surface such as fabric, a soluble dirt, and the detergent solution. Soluble dyes are used as dirt, with which a true reversible equilibrium is attained in the presence of a detergent.

With direct dyes on unprocessed cotton thread, the cotton is greatly affected by the detergent. Absorption is much increased because of better wetting. The difference between dyeing from water and from soap solutions was greatest for crystal violet and only slight for benzopurpurin. All detergents and salts affected the color of the dye solutions in different ways and to different extents.

Soft glass adsorbs dyes if rinsed with a few cc. of dye solution, then rinsed with distilled water until the rinsings are colorless. A first rinsing with 1 per cent of sodium hexametaphosphate following treatment with methylene blue and plain water rinses, gave a brighter blue solution than that given by borax, or sodium thiosulfate, but a paler blue than given by sodium sulfate. A second rinsing still gave a bright blue color, but a third rinsing, this time with 1 per cent of sodium oleate, gave an even deeper blue. The soap solution dissolves the dye, while the salt undergoes ion exchange The results presumably show the advantage of solubilization over mere ion exchange. Rinsing with lauryl pyridinium iodide or with synthetic detergent sulfates gave deep colors like those obtained with sodium oleate solution. Of many salts tested, those most commonly used as soap builders, although themselves devoid of solubilizing power, seemed the most effective in ion exchange. Ion exchange as used here is not a cleansing action but a process of substitution.

Solutions of sucrose, chloroform, 3 per cent acetone, and methyl cellulose were completely non-effective, although methyl cellulose plus a salt is effective. J. W. McBain, W. W. Lee, R. C. Merrill, Jr., and J. J. O'Connor. *Chemical Products* **4,** No. 3-4, 19-21 (1941).

Tergine in Soap

Tergine is obtained by hydrolyzing the residues from the manufacture of citric acid from lemons. The product contains 85-87.5 per cent of water, 9-12 of nitrogenous matter, 2-2.2 of cellulose, and 0.85-1 per cent of ash. It acts as an emulsifier when added to soaps and is frequently used for this purpose. The content of tergine in soap can be calculated by determining cellulose.

To detect cellulose, dissolve 10 grams of soap in 80-100 cc. of water, filter through a fritted-glass or alundum crucible, wash with boiling water, treat the residue with 15-20 cc. of Schweitzer solution, filter, acidify with 10 per cent sulfuric acid, and collect the precipitate by centrifuging and washing. Stain the cellulose with azorubin and examine microscopically. When soaps contain silicates, silica is separated by this treatment, but is not stained by azorubin. After separation, cellulose is determined by the method of Kürschner-Hanak. F. Di Stefano and F. Muntoni. *Ann. chim. applicata* **30,** 467-72; through *Chem. Abs.*

Measuring Oxidation of Oils

The peroxide number is not a valid measure of the extent to which oxidation has taken place in a vegetable oil. In a new method the spreading pressure of a drop of liquid placed as a monomolecular film on the hydrophilic balance is measured. This yields a far more accurate evaluation of oxidation in a vegetable oil such as soybean oil, or the presence of hydrophilic groups in any liquid, than the familiar peroxide number. Readings were taken on the "Cenco Hydrophil" balance, using distilled water as the substrate. The soybean oil was added to the water surface by means of a medicine dropper. Results on drop-spreading pressure were easily reproducible. George L. Clark and Frank M. Rugg. *Ind. Eng. Chem.*, Anal. Ed. 13, 243-4 (1941).

Electrical Treatment of Oils

Preliminary laboratory tests tend to show that, corresponding to the results obtained with unsaturated hydrocarbons, the application of ultra high-frequency and high-voltage currents in the processing of oils leads to reactions of hydrogenation, cleavage, oxidation, and polymerization. The various procedures to bring about the different types of reaction require further investigation. B. Zelenin. Masloboino Zhirovoe Delo **16,** No. 4, 16-23 (1940); through *Chem. Abs.*

Peroxide Number

The method of extracting fat from fatty material, when peroxide number is to be determined, was studied, covering the solvent to be used, distillation and conditions of working. Recommended procedure is: 10 grams of fatty material are heated with 50 cc. of a low boiling petroleum ether under a reflux condenser until the fat is completely dissolved. Carbon dioxide is then introduced. After cooling, the mixture is filtered through a Grossfeld funnel into a 100 cc. volumetric flask and brought to volume with petroleum ether. Ten cc. of the extract are then transferred to a distillation apparatus fitted with ground-glass stoppers, and the ether distilled off. The residue is used for the determination of peroxide number in the usual way. The method is intended to avoid change in peroxide value during preliminary manipulations. F. Kiermeier. *Fette und Seifen* **48,** 11-12 (1941).

Rancidity Prevention

In Germany it is very important to prevent loss and waste of fats by spoilage or rancidity development. A comparison of different concentrations of eugenol, pyrogallol, pyrocatechol, *alpha*-naphthol, phenol, thymol, and *beta*-naphthol, showed *beta*-naphthol to be the best antioxidant for use in fats. Proprietary products have been patented which can be added to fats to prevent their deterioration due to the activity of bacteria. E. Belani. *Seifensieder-Ztg.* **67,** 515, 526-7 (1940).

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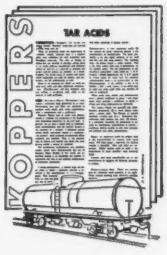

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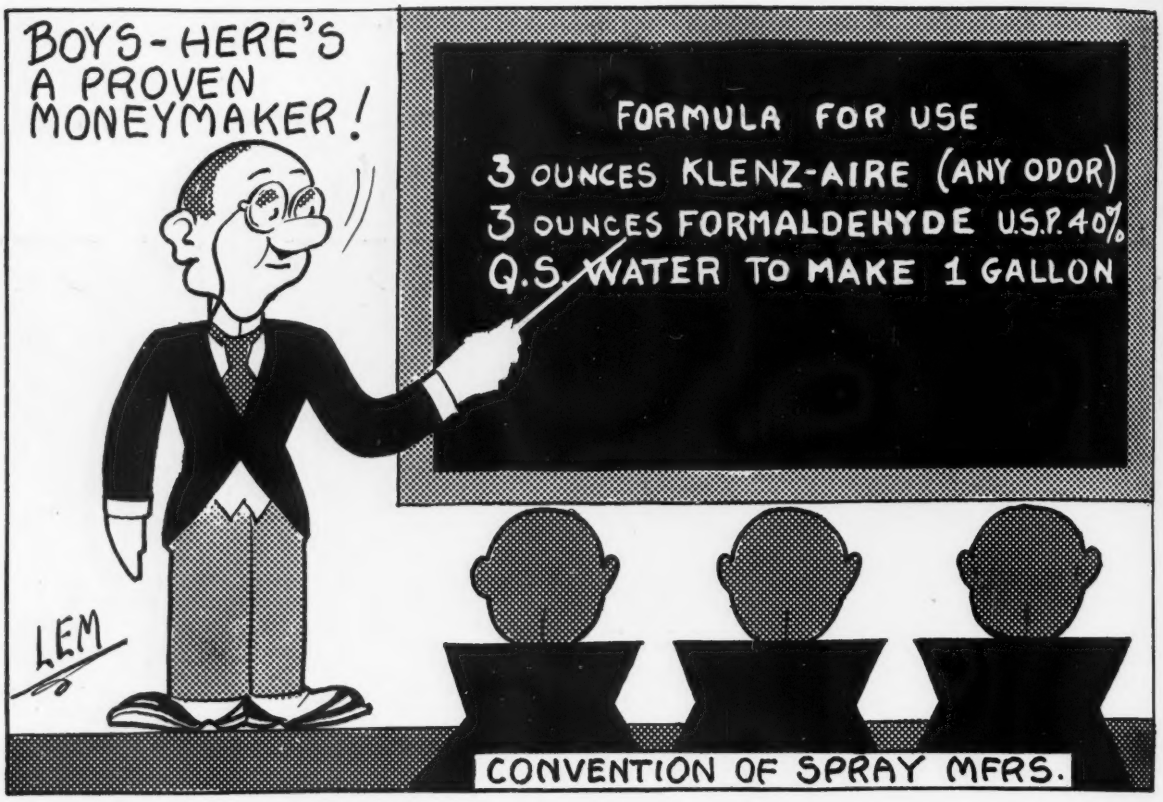
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Honey Aroma	Narcisse	Rose
Jasmin	New Mown Hay	Syringa
Lavender	Orange Blossom	Woodland Violet

Special odors furnished on request.

★ Based on the gallon price of "Aquaspray."

$2.00 per pint $14.00 per gallon

A request on your letterhead will bring further details and sufficient sample for 1 quart of finished spray.

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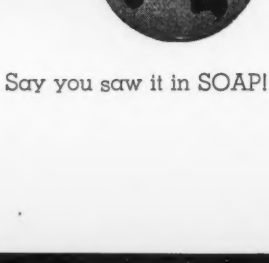
Filter Paper	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss



IS YOUR PACKAGE IN STEP

with today's buying habits?

TODAY, self-service and impulse buying have a tremendous influence on sales . . . that's why so many more manufacturers of disinfectants, insecticides, cleaning fluids, polishes and shampoos are turning to glass . . . for when sales are made or lost in a second, the attractive, impressive glass-packaged product wins the decision.

And after the sale is made, the Anchor Hocking package — with its efficient, convenient closure...goes on working for you...it's easy to open, easy to pour from . . . there's no evaporation or seepage, no rust or leakage . . . first-time purchasers are delighted, come back for more.

Anchor Hocking's Package Design Department is ready and anxious to help you get your packages in step with today's buying habits. ★

★Here's a Suggestion . . .

. . . just send us two each of those of your packages that may be "out of step," and we'll return them repackaged so you can see for yourself all the sales-stimulating power of glass as applied to your own products. No obligation, of course.

packages shown here, d with Anchor Hocking roved C.T. and Amerseal s, are but four of many tinctive stock packages in Anchor Hocking container-sure family.

ANCHOR HOCKING GLASS CAPS

ANCHOR HOCKING GLASS CORPORATION • LANCASTER, OHIO

KENYAPYE

Meaning

Kenya Pyrethrum Flowers

Developed and produced in Kenya
British East Africa

As the Strongest and most active Pyrethrum

Sufficient quantities are being harvested to provide for all American requirements as well as for the needs of the fighting forces

Regular Shipments are being Brought to America in Ships Flying the American Flag

KENYAPYE

IS IMPORTED AND MANUFACTURED IN AMERICA BY SKILLED ALL-AMERICAN CHEMISTS INTO CONCENTRATED BASES FOR INSECTICIDES WHICH HAVE BEEN PROVED

SAFE AND EFFECTIVE

. . . Deadly to Insect Life and Capable of Being Used Without Harm to Man or Beast.

WHY TAKE CHANCES WITH CHEMICAL SUBSTITUTES WHEN THIS SAFER VEGETABLE BASE IS AVAILABLE AT COSTS WHICH ARE BEING STEADILY REDUCED.

WHAT TO EXPECT WHEN YOU ORDER
PARAPONT*
PURITY...
Highest standards of purity are maintained in the manufacture of Du Pont "Parapont" para-dichlorobenzene. Result is a para-dichlorobenzene that is always white, lustrous, free-flowing.
UNIFORMITY...
No matter how large your order, every drum of "Parapont" will contain the same fine quality para-dichlorobenzene. Users rely on this consistent uniformity. That's why so many of them re-order so often.
ADAPTABILITY...
To meet every commercial need, Du Pont makes "Parapont" in seven different granulations. Your order can be filled on short notice, moreover, because Du Pont always has an adequate supply on hand. Place a trial order with us. We believe you'll want more.
*TRADE MARK
DU PONT
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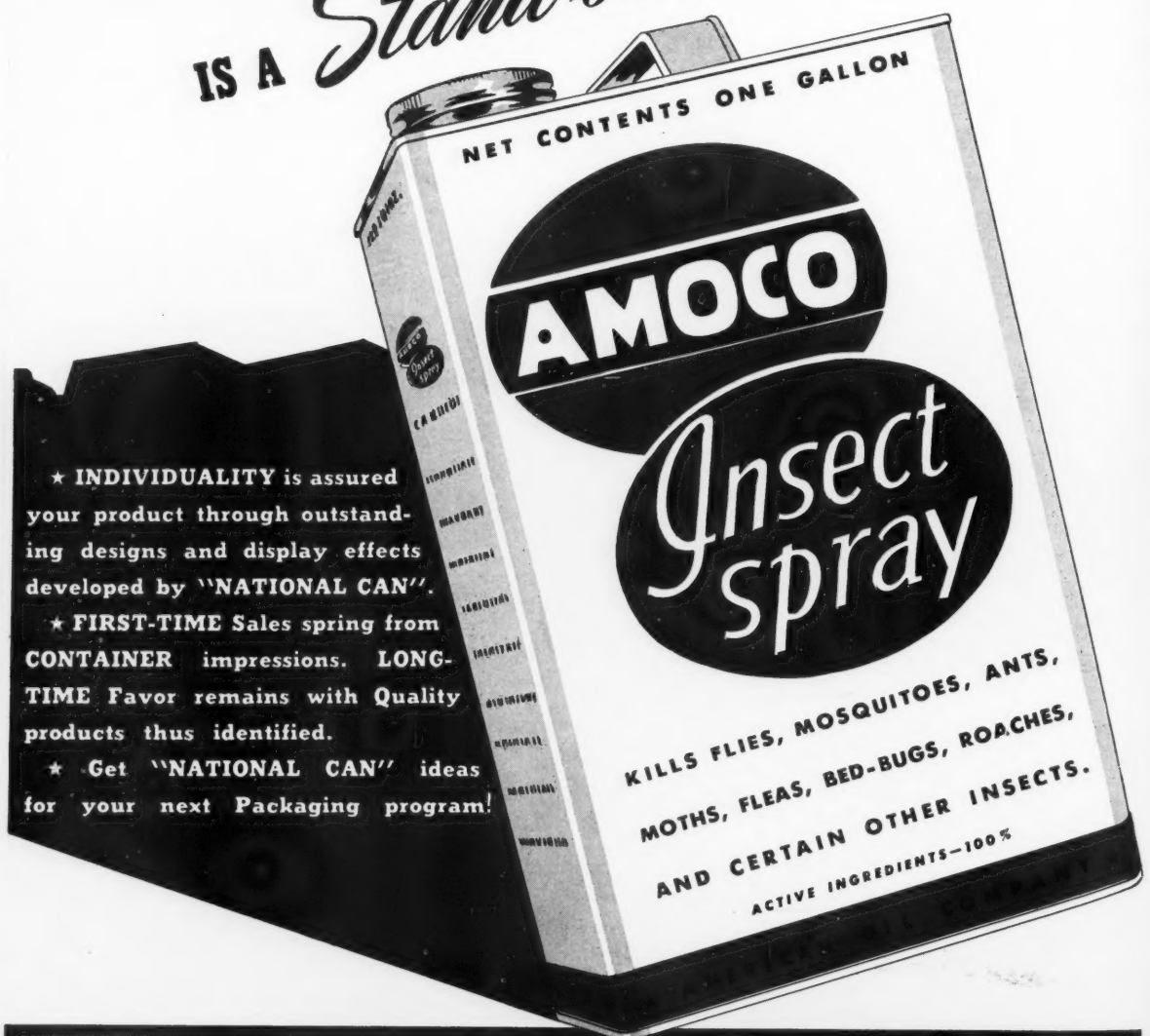
"NATIONAL CAN"

IS A *Stand-out* ON ANY COUNTER!



★ **INDIVIDUALITY** is assured your product through outstanding designs and display effects developed by "NATIONAL CAN".

★ **FIRST-TIME** Sales spring from **CONTAINER** impressions. **LONG-TIME** Favor remains with Quality products thus identified.

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For **DISINFECTANTS** *and* **FLY SPRAY ODORS**

Reasonably Priced Blends

CARNATION 2927
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GARDENIA 3390
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ROTENONE Resins
15 to 35% Rotenone

Concentrated Liquid
EXTRACT OF DERRIS
In Camphor Oil
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ROTENONE Extracts
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DERRIS, CUBE and TIMBO POWDERS
of Finest Grind

Suppliers of Rotenone Products to the insecticide industry.

DERRIS, INC.

79 WALL STREET NEW YORK, N. Y.

'petromask'

A NEW LINE OF

FLY SPRAY PERFUMES

$1.50 *per lb.*

Lower Prices in Quantities

GARDENIA "petromask"	No. 1166
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OXENES

FLY SPRAY PERFUMES

OF EXCEPTIONAL WORTH

$2.75 *per lb.*

Lower Prices in Quantities

DRYOXENE	No. 2178A
FLEUROXENE	No. 2133
HYDROXENE	No. 3484B
LILOXENE	No. 3470
MIMOXENE	No. 3484
NEUTROXENE	No. 3411
OROXENE	No. 3912
ROSEOXENE	No. 4298
VEROXENE	No. 5294

Both Types Use

REFINED PETROLEUM	1 oz. to 10-15 gal.
ORDINARY KEROSENE	1 oz. to 5 gal.

Trial Pound or Samples on Request

Send us a small sample of your insecticide unperfumed and we will show you how well and how reasonably your products can be perfumed. Write for Catalogue "B".

DREYER

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POWCO PYRETHRUM POWDERS— Finer milling to give you more particles per pound—greater spread with higher kill.

BASIC PYRETHRUM EXTRACTS — Long recognized as outstanding because they are made by selective, cold extraction.

STIMTOX— The low cost, fortified pyrethrum powder that makes effective dusting economical. Widely used by Pest Control Operators and Farm Supply Companies.

ROTENONE PRODUCTS—Derris, Cube and Timbo powders of the same finer grinding; and Crystals, Resins, Extracts—products to meet your specifications as you need them.

PYRISCENTS— By actual tests, our, Entomologists found that many commonly used perfume oils reduce the killing power and break down perfume values, causing spray odors to go "sour". Pyriscents (available in any odor desired) assure you of absolute perfume protection—they are completely oil soluble, *will not reduce killing power,* and maintain their full odor value.

HYDROSCENTS-Concentrated perfume bases that are readily miscible with water and have a lasting aromatic efficiency; specifically developoped for use in liquid soaps, theater sprays and other preparations requiring complete water miscibility.

PYRIN— The insecticide concentrate combining the best features of pyrethrum and isobutyl undecylenamide—See advertisement on front cover of Sanitary Products Section.

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114 East 32nd Street, New York City.

"KILLING POWER—That's the thing!"

Hi-Tox 20
for
Household Sprays

News of Importance on Cattle Sprays!

Hi-Tox 20
for
Mill Sprays

At No Extra Cost, HI-TOX 20 is available in a pure steam distilled pine oil base. This base has been selected after exhaustive tests on all available steam distilled pine oils, and has been proven highest in repellency and purity.

Repellency of HI-TOX 20 itself is high . . . and now combined in a superior pine oil base will give you higher repellency than is possible with any of the other materials now available.

Economical—Prices on HI-TOX 20 are lower this year and this combination will save you at least one-half your present cost of pine oil.

Toxicity—non-poisonous and non-irritating to the skin.

We shall be happy to work out the details with you to improve and economize on your present formulas.

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When You Order DISINFECTANTS

Specify Baird's *Certified* DISINFECTANTS!!

Certified Killing Power

Every lot of disinfectant is checked for its Germicidal value in our own and commercial laboratories. Each shipment is plainly marked with the phenol coefficient and inert ingredient statement.

Certified Uniformity

Raw materials are constantly checked for uniformity to *insure uniformity* in the finished disinfectant. Color, odor, viscosity, emulsion and strength remain constant—these disinfectants are "tops" in their field.

Certified Stability

To insure stability, these disinfectants are made from the finest raw materials, manufactured into finished products under expert trained supervision and tested time and time again so that you and your customers in turn get the finest germicides.

COAL TAR DISINFECTANTS **HOUSEHOLD INSECTICIDE** **CRESYLIC DISINFECTANTS**

CREOSOTE OILS **PINE OIL DISINFECTANTS** **BAC-TROL** **CRESYLIC ACIDS**

TO THE WHOLESALE TRADE ONLY

Holbrook, Mass.—**BAIRD & McGUIRE, INC.**—St. Louis, Mo.

SANITARY PRODUCTS

A SECTION OF SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

SOME pine oil disinfectant manufacturers have expressed worry over reports that these disinfectants are being regarded as a fire hazard in certain localities and have been threatened with restrictions because of this. A recent investigation revealed that the low flash point of some pine disinfectants was due to the addition of highly volatile and inflammable solvents. In short, a straight unadulterated pine disinfectant is perfectly safe and can meet any requirement for an open cup flash point of 140 or 150 F. But the addition of low-boiling solvents, particularly alcohols as in one case, can drop the flash point below 100 F. and into the danger zone. This is a point which might well be called to the attention of fire prevention authorities when and if there is any threat to ban pine disinfectants because of a supposed fire hazard. True pine disinfectants are not dangerous. It is adulteration which introduces fire risk.

IN studying judgments for violation of the Insecticide Act of 1910 over the past year, we are amazed at the large number of cases involving improper labeling. We do not refer to cases where evident mistakes are involved, but to cases which show a gross ignorance of the law, where the label indicates that the seller of the goods does not even know that there is an insecticide law. This seems to be especially true in many instances where pine disinfectants and deodorants are concerned, although we note some coal-tars and insecticides also involved. How some people can attempt to engage in a business without knowing about or competely ignoring a controlling law which has been in effect for thirty years is beyond us.

TWO deaths in a recent ship fumigation at the Port of Newark in New York Harbor have cast another shadow over the business of controlling rodents and other vermin, — a vitally necessary business to protect the health of the nation. As in the case involving multiple deaths in Pennsylvania some months ago from fluoride poisoning, this latest unfortunate incident is a further invitation to harsh and oppressive regulation. The reaction from the Pennsylvania case among law-makers and enforcement officials has been widespread. And when we consider that behind these accidents is human carelessness, the stigma which attaches to the products in question and their use, is eminently unfair. The materials used in fumigation and extermination are no more dangerous to human life than a thousand and one things which play a necessary part in our daily work,—fire, automobiles, high speed machines,—and they should be looked upon accordingly. Regulation is of course very necessary, but it should not be born of the hysterical aftermath of an accident. It should be given the careful thought and study which its importance deserves.

INSECTICIDE-DISINFECTANT MANUFACTURERS MEETING

Discuss legislation, unbroken packages, cattle sprays, pyrethrum deterioration, public sanitation, tests on crawling insects, disinfectant marketing at 27th mid-year meeting of N.A.I.D.M. in Chicago . . . hold question and answer hour . . . consider draft of model state law for insecticides and disinfectants.

THE purchase of sanitation supplies, cattle spray testing, bacteriological aspects of public sanitation, pyrethrum deterioration and labeling, unbroken package requirements, test methods on crawling insects, mothproofing, household plant sprays, marketing methods, a proposed model state disinfectant and insecticide law, general legislation, and other subjects form the basis for the program for the 27th mid-year meeting of the National Association of Insecticide & Disinfectant Manufacturers at the Edgewater Beach Hotel, Chicago, on June 9 and 10. Leading manufacturers of insecticides, disinfectants, and other sanitation supplies from all parts of the country are in attendance. The general meeting will last for two days, and was preceded by a meeting of the Board of Governors of the Association on June 8.

Among the speakers listed on the program, and their subjects, are the following: C. O. Auslander, purchasing agent for the Michael Reese Hospital, Chicago, on "What the Hospital Wants in Sanitation Supplies"; Dr. F. L. Campbell of Ohio State University, reporting on a special research project, on "Evaluation of Liquid Insecticides Against Crawling Insects"; Dr. C. S. Corl of Allaire, Woodward & Co., Peoria, Ill., on "A twenty-year Picture of Pyrethrum Prices and Scientific Investigations"; Dr. G. J. Hucker of Cornell University on "Some Bacteriological Aspects of the Public Sanitation Problem"; Dr. R. C. Roark of the U. S. Department of Agriculture on "Control of Household Insects with Smokes Containing Pyrethrum, Derris, and Certain Synthetics"; Dr. H. G. Whitmire of the Whitmire Research Corp., St. Louis, on "Correlation between Repellancy and Evaporation of Commonly Used Stock Spray Oils"; Dr. E. M. Searls of the University of Wisconsin on "A New Method for Studying the Effectiveness of Cattle Sprays."

WILLIAM ZICK
. . . N.A.I.D.M. President

"A Model Insecticide Law" will be discussed by Henry C. Fuller, Washington, D. C., technical consultant for the Association, and will comprise the presentation for open discussion of a new proposed model state law covering insecticides, fungicides, and disinfectants, and their regulation. This will be followed by a discussion of both sides of the question: "Shall the Sale of Insecticides and Disinfectants be restricted by law to Unbroken Packages?" The speakers on this topic will be J. N. George, secretary of the Interstate Manufacturers Association, John N. Curlett of McCormick & Co., Baltimore, and Mr. Fuller. A general discussion from the floor will follow.

Other speakers at later sessions of the meeting will include Dr. Alfred Weed of John Powell & Co. on "Deterioration of Powdered Pyrethrum"; and Dr. Thomas Carpenter of the Sinclair Refining Co. on "Household Sprays for Plant Purposes." Professor Fred A. Russell of the University of Illinois, will talk on "A Modern Slant on Marketing Problems." Gordon M. Baird of Baird & McGuire, Inc., Holbrook, Mass., has prepared a paper on "U.S.P. Cresol Compound versus Cresylic Disinfectants" which will be read.

Special committee reports will be heard from F. W. Fletcher of the

C. P. McCORMICK
. . . runs "Information Please"

Dow Chemical Co. on "Mothproofing Investigations," and from Frank C. Nelson of Stanco, Inc. on "Methods of Testing Cattle Sprays." Dr. A. E. Badertscher of McCormick & Co., chairman of the insecticide scientific committee, will report on the work of this committee since the first of the year. Dr. E. G. Klarmann of Lehn & Fink Products Corp., chairman of the disinfectant scientific committee, will likewise report on the work of his committee.

During the two days of the meeting, group luncheons will be served each day. The general meeting will close on Tuesday evening, June 10, with an informal beefsteak dinner and floor show in the Michigan Room of the Edgewater Beach Hotel. M. J. Flanagan of the Federal Varnish Co., chairman of the entertainment committee, will be in charge, assisted by E. E. Brand of L. Sonneborn Sons, and Fred Hogg of the Hercules Powder Co.

The program for the meeting was arranged by a committee headed by R. P. Neptun of Allaire, Woodward & Co., chairman, and Dr. George Reddish of Lambert Pharmacal Co., and George L. Simmonds of U. S. Sanitary Specialties Corp. The general convention committee is headed by N. J. Gothard of the Sinclair Refining Co. Finances are in charge of the Association treasurer, John Powell of John Powell & Co. Transportation arrangements were completed by Robert B. Magnus of Magnus, Mabee & Reynard, Inc. The registration desk at the meeting is in charge of David W. Lynch of John Powell & Co.

R. P. NEPTUN
. . . planned meeting program

Program

Monday, June 9th—Morning Session
W. J. Zick, Presiding

9:00 A.M.—Registration.

9:30 A.M.—Meeting called to order.

Announcements.

Address of the President, W. J. Zick, Stanco, Inc.

Appointment of committees.

Report of the Secretary, Ira P. Mac Nair, Mac Nair-Dorland Co.

Roll call and introduction of guests.

Report of Entertainment Committee—M. J. Flanagan, Federal Varnish Co.

"The Present Monetary Situation and the Federal Reserve System" —Mr. Charles B. Dunn, General Counsel, Federal Reserve Bank, Chicago.

"U.S.P. Cresol vs. Cresylic Disinfectants" — Gordon M. Baird, Baird & McGuire, Inc.

Report of Disinfectant Scientific Committee—Dr. E. G. Klarmann, Lehn & Fink Products Corp.

N. J. GOTHARD
. . . general convention chairman

"What the Hospital Wants in Sanitation Supplies"—Mr. C. O. Auslander, Purchasing Agent, Michael Reese Hospital, Chicago.

12:30 P.M.—Group luncheon.

Monday, June 9th, Afternoon Session
J. N. Curlett, Presiding

2:00 P.M.—Meeting called to order.

Announcements.

"Information Please!" — A Question and Answer Clinic—C. P. McCormick, director.

Board of Experts
Dr. E. G. Klarmann
Dr. A. E. Badertscher
Mr. L. J. LaCava
Mr. Ira P. MacNair

"Some Bacteriological Aspects of the Public Sanitation Problem"—Dr. G. J. Hucker, Chief in Research, Bacteriology Division, N. Y. State Agricultural Experiment Station, Geneva, N. Y.

"Evaluation of Liquid Insecticides Against Crawling Insects"—Final Report NAIDM-Ohio State University Project—Dr. F. L. Campbell, Professor of Entomology, Ohio State University, Columbus, Ohio.

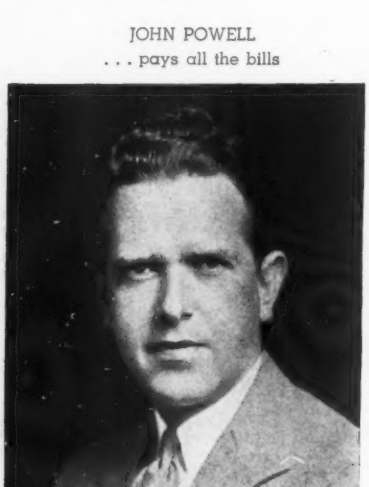
(Colored movie film showing methods used in conducting this work will be shown by Mr. C. S. Barnhart, Ohio State University.)

"Control of Household Insects with Smokes Containing Pyrethrum, Derris, and Certain Synthetics"—Dr. R. C. Roark, in charge, Insecticide Investigations, U. S. Department of Agriculture, Washington, D. C.

"A Twenty-year Picture of Pyrethrum Prices and Scientific Investigations" — Dr. C. S. Corl, Allaire, Woodward & Co.

4:30 P.M.—Adjournment.

JOHN POWELL
. . . pays all the bills



M. J. FLANAGAN
. . . in charge of entertainment

Tuesday, June 10th, Morning Session
W. J. Zick, Presiding

9:30 A.M.—Meeting called to order.

Announcements.

"Correlation Between Repellancy and Evaporation of Commonly Used Stock Spray Base Oils"—H. G. Whitmire, Whitmire Research Corp.

"Buying Maintenance Supplies"—C. N. Skidmore, Purchasing Agent, Northwestern Univ., Chicago.

"A Model Insecticide Law"—Henry C. Fuller, NAIDM Consultant, Washington, D. C.

"Shall the Sale of Insecticides and Disinfectants Be Restricted by Law to Unbroken Packages?"

Speakers: J. M. George, Secretary, Inter-State Manufacturers Association, Winona, Minn.; J. N. Curlett, McCormick & Co.; H. C. Fuller, NAIDM Consultant.

Report on Coloration of Powdered Insecticides — Ira P. MacNair, Mac Nair-Dorland Co.

Report on Export Standards—John A. Marcuse, West Disinfecting Co.

"A New Method for Studying the Effectiveness of Cattle Fly Sprays"—Dr. Ed M. Searls, University of Wisconsin, Madison, Wisconsin.

12:30 P.M.—Group luncheon.

Tuesday, June 10th, Afternoon Session
W. J. Zick, Presiding

2:00 P.M.—Meeting called to order.

Announcements.

Report of Work of Insecticide Scientific Committee—Dr. A. E. Badertscher, Chairman; McCormick & Co.

"Methods of Testing Cattle Sprays"—F. C. Nelson, Stanco, Inc.

"Mothproofing Investigations"—F. W. Fletcher, Dow Chemical Co.

"A Modern Slant on Marketing Problems" — Professor Fred A. Russell, School of Commerce, University of Illinois, Urbana, Ill.

"Household Sprays for Plant Purposes" — Dr. Thomas Carpenter, Sinclair Refining Co.

"Deterioration of Powdered Pyrethrum"—Dr. Alfred Weed, John Powell & Co.

Reports of Miscellaneous Committees.

Report of Resolutions Committee.

Unfinished Business.

4:30 P.M.—Adjournment.

6:30 P.M.—Cocktail Party.

7:30 P.M.—Informal Beefsteak Dinner and Floor Show.

———♦———

Material for waxing and polishing various surfaces contains wax admixed with *N*-dodecylphthalimide or other *N*-alkyl phthalimide containing at least 6 carbon atoms, to serve as a luster-producing agent. Wm. O. Pool and James Harwood, to Armour & Co. U. S. Patent No. 2,225,392.

———♦———

About 5 per cent of hexachloroethane, acetone, chloroform or chloral hydrate is used as an activating agent with mono- and dichlorobenzenes in insecticides suitable for combating moths. Hans von Philipp. U. S. Patent No. 2,214,782.

E. G. KLARMANN
. . . expert on disinfectants

Camera Visit *To The* New
SINCLAIR ENTOMOLOGICAL LABORATORY

SINCLAIR REFINING COMPANY recently completed one of the finest entomological laboratories in the world at its big refinery in East Chicago, Indiana. The laboratory is housed in its own building which was specially designed and equipped for propagating insects and testing the lethal efficiency of Sinclair insecticides. It is modern in every detail of construction and appointment. The building 38′ by 68′ is a one-story steel frame, brick and concrete structure, with a large wall area of glass block windows.

The interior is divided into an office and five rooms, four of which are devoted to actual laboratory functions. There is an insectary, or breeding room, 20 by 16 feet, containing dozens of cages and trays for insect propagation. The largest room, 32 by 35 feet, is the main testing room. It contains six Peet-Grady chambers, and there is also a "household" test room.

The entire laboratory is air-conditioned. It has its own installation which permits absolute control of temperature and humidity, also maintenance of ideal conditions for all operations. For the breeding operations, temperature is kept at 80° F. with 50 per cent relative humidity.

The Peet-Grady chambers are made of plywood and the interiors are completely lined with a stainless steel product. This provides a non-porous surface, easy to clean, and tests are not influenced by any residue from previous tests.

Each test of Sinclair insecticide employs 100 flies and is matched with a similar test using the Official Test Insecticide of the National Association of Insecticide and Disinfectant Manufacturers. In determining the efficiency of each batch, the results of at least 10 tests are compared against 10 tests using the O.T.I.

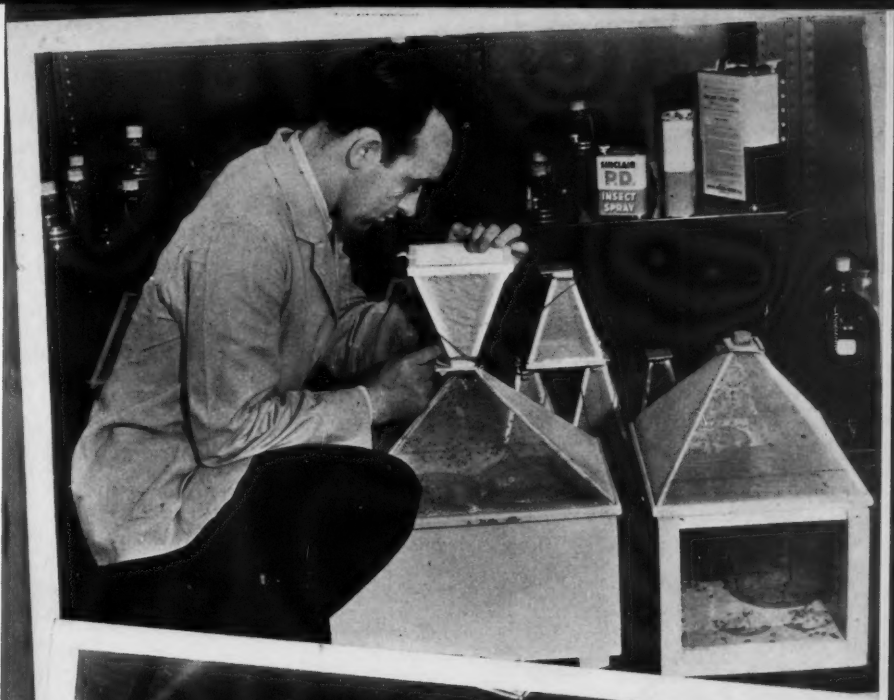
The "household" test room, 13 by 16 feet, offers conditions duplicating those found in the average home. Tests made here, determine whether or not the insecticide will be as effective in home surroundings as indicated by the Peet-Grady results.

Each breeding cage is home to a colony of 150 flies. Here they're fed on milk, cinnamon buns and other similar food. Air conditioning assures good healthy specimens.

As soon as eggs are laid in the breeding cages, a laboratory technician carefully removes them to culture jars. They hatch in less than a day.

Within 14 days, the flies pass through the egg, larval and pupal stages. The young flies are then transferred to these stock cages holding 1500.

It takes the young flies only 3 to 5 days to reach their maximum vitality. They are then released from the stock cages in batches of one hundred to small counting cages.



After the flies have been placed in counting cages in batches of 100 each, a cageful is released in one of the Peet-Grady chambers for the test.

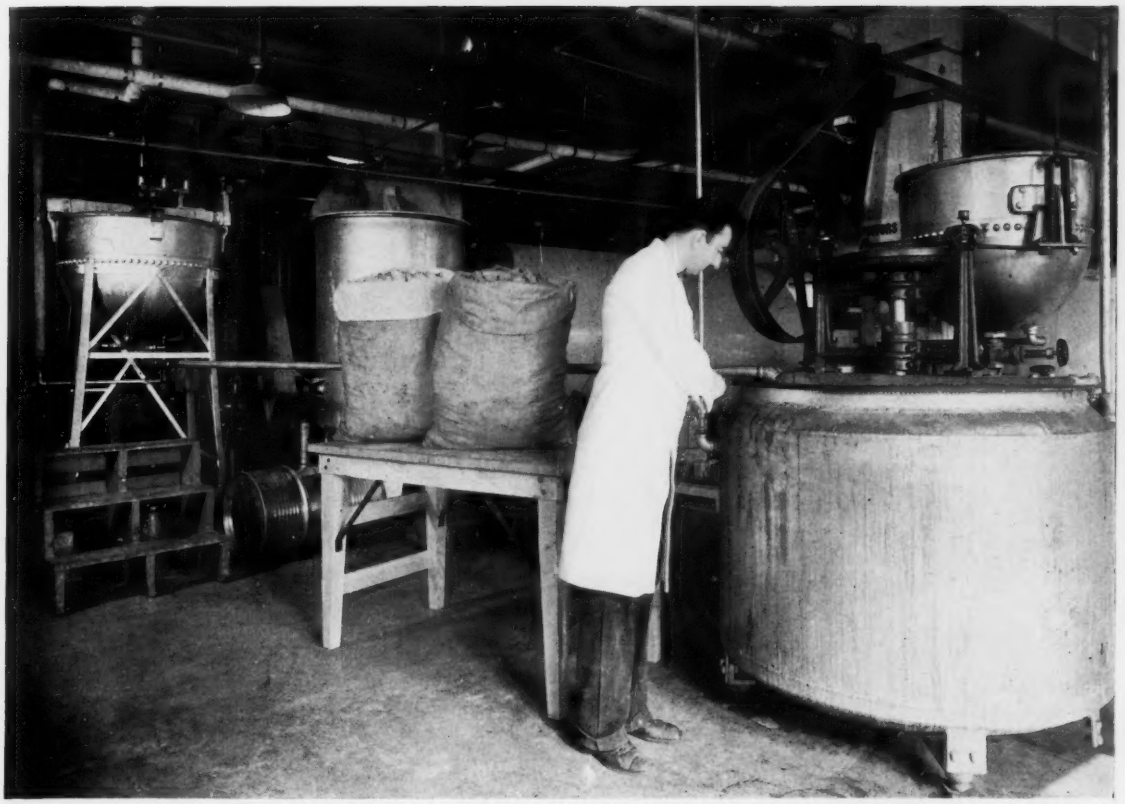
With his subjects ready, A. G. Grady, co-developer of the Peet-Grady method, and head of the Sinclair laboratory technical staff, injects the insecticide to be tested.

Roaches are also used in testing the killing power of Sinclair insecticides. This is one of the breeding trays used for roach propagation.

Below: A Sinclair technician counts the flies knocked down in the test.

Final death count. For an AAA rating, insecticides must show 16 points better than the N.A.I.D.M. test insecticide.

From the "death chamber,' kayo'd flies are quickly removed to observation cages for a 24-hour period. Here they get food and every chance to recover.



Liquid Floor Waxes

By Dr. E. G. Thomssen and Dr. J. R. Johns

J. R. Watkins Co.

THE preparation of satisfactory liquid waxes or water-wax emulsions presented many difficulties up to about ten years ago. Today it is possible readily to prepare uniform, finely dispersed wax emulsions which may be diluted and which are stable under varying atmospheric conditions, as well as age. This is due to the advances which have been made by the availability of comparatively cheap, reliable emulsifying agents. As a result of these advances, the possibility of economical production and less laborious application methods of the emulsions to various surfaces, liquid waxes have largely replaced the more fire-hazardous wax solutions and pastes usually made with inflammable, low-boiling hydrocarbons as solvents. Liquid waxes may include both paraffins and true waxes. Liquid wax emulsions find employment as paraffin emulsions for coating paper, wood, fabrics, etc. In the cosmetic field creams and lotions also use these emulsions. The use of emulsified carnauba wax as a self-polishing wax for floors, linoleum, leather, shoes, etc., under the names of floor wax or liquid wax or coined names, has a wide application, especially to the consuming trade. In this discussion we will limit our remarks to wax emulsions of the carnauba type.

The development and increased importance of these liquid floor waxes may be traced by reviewing the references in *Soap and Sanitary Chemicals*, in which much of the literature on the subject has appeared. Prior to 1931, *Soap* carried a few references and a few advertisements referring to liquid floor waxes. Then the subject matter and advertisements listed wax emulsions largely as side lines. By March, 1934 their growing importance was reflected by the advertising of "new, improved," "self-polishing," "excellent floor finishing" floor waxes. Technical articles dealing with raw materials, changes in manufacturing technique, testing methods, etc., have

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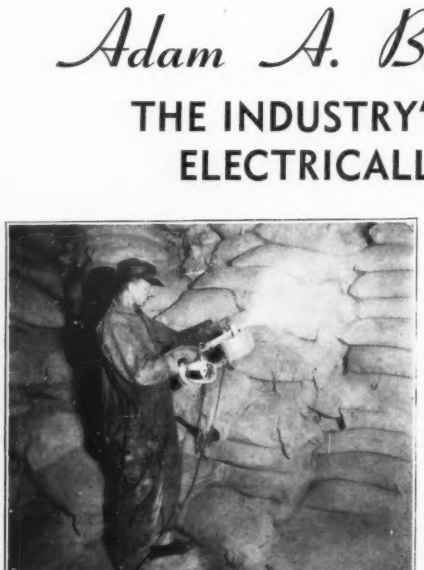
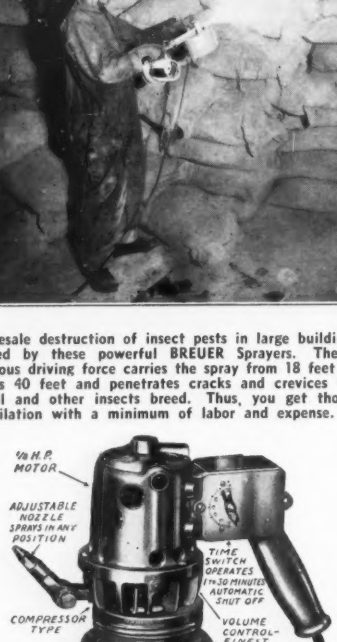
Adam A. Breuer's SPRAYERS

THE INDUSTRY'S MOST COMPLETE LINE OF ELECTRICALLY OPERATED EQUIPMENT



Wholesale destruction of insect pests in large buildings is insured by these powerful BREUER Sprayers. The tremendous driving force carries the spray from 18 feet to as far as 40 feet and penetrates cracks and crevices where weevil and other insects breed. Thus, you get thorough annihilation with a minimum of labor and expense.


1/8 H.P. MOTOR
ADJUSTABLE NOZZLE SPRAYS IN ANY POSITION
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1 QUART CONTAINER
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MODEL 54

The Most Popular BREUER Model. Automatic time switch, adjustable nozzle, 1 H.P. GE motor, one-quart aluminum container.

3 BIG BALL BEARING SPRAYERS FOR LARGE AREAS

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You can build up your sales to quantity users of insecticide, such as warehouses, food product factories, wholesale groceries, dairy barns, restaurants, etc., with these sprayers designed especially for fast, thorough coverage of large areas. The large volume of air, delivered at high velocity, carries the fine mist for distances impossible with ordinary pressure spraying. Also highly efficient for moth-proofing.

All three models are equipped with powerful GE motors, mounted on Norma Greaseal Ball Bearings which require no oiling; twenty feet of rubber covered cord; one-gallon capacity tank.

3 PROVEN COMPRESSOR-TYPE MODELS

Thousands of BREUER Compressor-type Sprayers now in use, attest the superior quality and performance of these machines. Exclusive, patented principle siphons liquid through the compressor, providing continuous automatic lubrication, and warming liquid above room temperature for maximum diffusion and penetration. A convenient air volume control regulates density of spray. Adjustable nozzle sprays upward or downward at any angle. Genuine GE motors, twenty feet of rubber covered cord, high grade aluminum castings throughout.

MODEL 54. (Illustrated) Equipped with Thirty Minute Automatic Time Switch. Set the pointer for number minutes operation desired, and the current is automatically shut off at the end of that period. 1/8 H.P. GE motor, one-quart aluminum container, broad metal base.

MODEL 53. One-quart capacity, toggle switch sprayer of highest quality. 1/8 H.P. GE motor, aluminum container.

MODEL 36A. A powerful one-gallon capacity automatic Sprayer for larger areas. 1/3 H.P. GE motor, one-gallon aluminum container, twenty feet of rubber covered cord.

See the BREUER Electric Sprayers at the NAIDM mid-year meeting at the Edgewater Beach Hotel, Room 189, Chicago, June 9th and 10th. Or write for full details and prices to the industry.

BREUER ELECTRIC MFG. CO.

5118 NORTH RAVENSWOOD AVE. **CHICAGO, ILL.**

We do not sell insecticides. Our business is manufacturing sprayers. Patented in U. S. A. and foreign countries.

appeared with increased frequency with the development of more widespread interest in these products.

In discussing liquid floor waxes it is our intention to (1) comment upon the raw materials used in their manufacture; (2) discuss the equipment required; (3) give actual methods of manufacture for these emulsions and (4) give some general comments including tests and analyses of the finished product.

Raw Materials

The raw materials necessary for the manufacture of floor waxes are emulsifying agents, waxes, fatty acids, lacs, resins or other anti-slipping materials, slowly volatile fluids, wetting agents, perfumes and water.

The Amines

The amines, as is well known, may be considered derivatives of ammonia in which the hydrogen is substituted by an organic radical. They contain the NH_2 group. They have an ammoniacal odor and combine with acids to produce salts. When used as emulsifying agents the acid used is generally a fatty acid and the resulting salt is a soap. These soaps are good surface tension depressants. Since ammonia will form soaps with fatty acids it is only natural that attempts have been made to make wax emulsions with ammonia soaps. The difficulty with these lay not only in their not depressing the surface tension sufficiently but also because they were unsatisfactory for use at the high temperature necessary to produce wax emulsions. The ammonia soaps decompose at elevated temperatures.

Among the emulsifying agents we include the amines triethanolamine, morpholine, 2-amino-2-methyl-1-propanol and other emulsifiers.

In February, 1930[1] A. L. Wilson described a new commercial material, triethanolamine, well suited for emulsification purposes and said to have numerous advantages over the inorganic bases used for emulsifying up to that time. The use of triethanolamine as a basic material for soaps and the emulsification of mineral oils, vegetable and animal oils, waxes and various solvents was discussed. It was shown that the general utility of triethanolamine greatly increased the possibility of emulsions in industrial applications. In this article the author stated: "Concentrated emulsions may be prepared which have the properties of uniformity, fine dispersion, ready dilutibility, and perfect stability under all conditions, such as long-standing, temperatures varying from freezing to boiling point, and pressures involved in rubbing and polishing operations. In addition, their soap content is relatively low, so that the dried film has very nearly the properties of the pure wax and is completely resistant to water. For emulsification of all hard waxes, stearic acid, perhaps because of its physical properties, gives better results than the liquid fatty acids. The method of emulsification consists in preparing a molten solution of acid and wax followed by the stirring of this into a water solution of the base at approximately the same temperature. Uniformity is quickly produced by further agitation and the product is at once dilutable with cold water." Following the publication of this article the makers of the product furnished various manufacturers their information and formula book on triethanolamine which was titled "Emulsions." As a result of these two sources the introduction of liquid waxes, on a large scale production, followed.

Triethanolamine $N(C_2H_4OH)_3$ or trihydroxyethylamine is a clear, colorless to straw-colored liquid, viscous and very hygroscopic. It has a boiling point of 277°C. and its molecular weight is approximately 127 because it contains some mono and diethanolamines. As it is an organic base like ammonia, the amine group is alkaline and readily forms soaps with fatty acids. These soaps, especially the oleate and stearate, have great value as surface tension depressants. The general method of emulsification consists of dissolving the fatty acid in the oil or wax and mixing this solution with a triethanolamine solution in water. The ease with which stable emulsions can be produced provided a ready market for this new chemical. Not only are the emulsions easily prepared with the triethanolamine soaps, but the soaps thus made are soluble in oils or waxes and possess buffered alkalinity.

The chief drawback with floor waxes made with triethanolamine which we will designate for sake of brevity as "T.E.A." is their not being water resistant or that they are re-emulsifiable after having been applied, buffed and dried. Light water mopping caused spotting and too rapid removal of the wax coating from floors. This defect has been overcome by the use of two newer organic chemicals, morpholine and 2-amino-2-methyl-1-propanol.

Up to the latter part of 1935 little was known about the use of morpholine, so called because of the supposed identity of its basic ring with that of the alkaloid morphine. Morpholine is a cyclic ether amine with the formula $NH(C_2H_4)_2O$ and was discovered by Knorr in 1889. The announcement of its production on a commercial basis was made in August, 1935 by A. L. Wilson[2] who also had announced T.E.A.

Morpholine is an ammoniacal smelling, mobile, colorless liquid with a boiling point of 128° and molecular weight 87.08. It is water soluble and possesses a high solvent power for various substances. Like the other amines it forms soaps which have the advantage of easily forming oil-in-water emulsions with oils and waxes. In making floor waxes it remains in the film during the major part of the drying and after gradually volatilizing leaves an emulsified wax film with desirable water resistance and gloss. When used in conjunction with T.E.A. no difficulty is occasioned in forming a stable emulsion. For this reason it may be used with T.E.A. for making wax emulsions.

[1] *Industrial & Engineering Chemistry*, Vol. 22, No. 2, Page 143.

[2] *Industrial & Engineering Chemistry*, Vol. 27, No. 8, Page 870.

U.S.I. ALCOHOL NEWS

June ★ A Monthly Review of Technical Developments for Chemists and Executives ★ 1941

MORE KILLING POWER PER UNIT COST

The household fly is one of the many insects for which sprays formulated with DEREX have high kill power. In addition, DEREX offers high repellency and economy in spray formulation.

DEREX in Insecticides Provides High Kill Power, Economical Formulation

Low cost and high killing power in insecticide sprays are easily obtained by the use of DEREX, a biologically standardized solution of derris extractives in the U.S.I. solvent INDALONE*. DEREX is available in two forms with equal kill power: DEREX Standard, containing rotenone; and DEREX Rotenone-free. Every lot is bio-assayed to assure uniformly high killing power.

Economies in Formulation

DEREX offers exceptional opportunities to formulate highly effective insecticides at low cost. Derris extractives give lowest cost per unit kill of any of the commonly used insecticide materials. Their effectiveness is further enhanced by solution in INDALONE, which itself is insecticidally active.

In addition, it is a well-known fact that high killing power can be obtained much more economically by using a combination of active ingredients than by any one insecticidal principle. It has been demonstrated that combinations of DEREX with pyrethrum or the aliphatic thiocyanates are more efficient than either of these ingredients alone.

DEREX is Concentrated

One gallon of DEREX, when added to 200 gallons of any Grade B fly spray, will produce a Grade AA product having a kill of 20 to 30 points above that of the Official Test Insecticide. Moreover, DEREX is effective not only against flies but also against other insects.

Stability an Added Advantage

The high stability of DEREX removes the serious disadvantage in the use of derris extractives and rotenone. The stability of DEREX has been clearly demonstrated by numerous storage tests. Finished insecticides containing DEREX in combination with pyrethrum or thiocyanates in deodorized kerosene have been found to retain their killing power over a storage period of two years. The samples were bio-assayed at intervals from 6 to 24 months, and in every case the killing power of the storage sample was found to be within ± 3 points of that of a freshly prepared sample having the same composition.

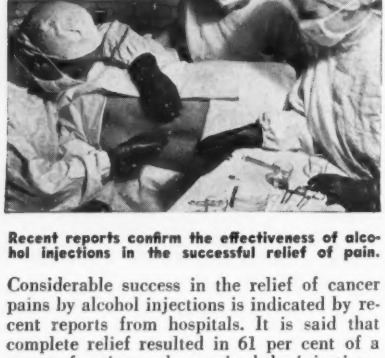
Use in Cattle Sprays

DEREX offers special advantages in the formulation of cattle sprays because of its pronounced repellency. A 5% solution of INDALONE, the solvent used in DEREX, is equal to 60% oil of citronella in repellency. DEREX offers an effective means of adding repellency as well as killing power to cattle sprays.

U.S.I. will gladly give additional information on DEREX in insecticides and also on INDALONE in insect-repellent lotions.

**Registered Trade Mark*

REPORT ALCOHOL INJECTIONS SUCCESSFUL IN PAIN RELIEF



Recent reports confirm the effectiveness of alcohol injections in the successful relief of pain.

Considerable success in the relief of cancer pains by alcohol injections is indicated by recent reports from hospitals. It is said that complete relief resulted in 61 per cent of a group of patients who received the injections.

The method is described as consisting of injecting a definite amount of absolute alcohol into the spinal cord. The effect is apparently to reduce the number and intensity of the pain stimuli, giving relief which is reported to have lasted from two months to periods as long as several years.

These reports confirm other recent investigations indicating the value of alcohol injections in the relief of pain. According to medical authorities, the effectiveness of alcohol results from the fact that in small doses it has a selective affinity for the pain fibers. It is reported that the addition of a small amount of methylene blue increases effectiveness.

TECHNICAL DEVELOPMENTS

For further information write U.S.I.

An absorption base for lipsticks, produced domestically, is said to permit the addition of larger quantities of Bromo-Acid and to increase indelibility. **(No. 460a)**

A new concentrate for soapless shampoos is said to give excellent foaming qualities. According to the maker, dilution with equal parts of water results in a finished product. **(No. 461a)**

A new wetting agent is reported to have a pleasant taste and to be suitable for use in liquid, paste, or powder dentifrices. **(No. 462a)**

Floral notes in gardenia compositions can be strengthened by the addition of 5 to 10% of a new product, it is claimed. Maker says product can be used also in other floral compounds. **(No. 463a)**

A new emulsifier is said to have been developed especially for use in deodorant and anti-perspirant creams of the greaseless type. Maker says it is available at relatively low price. **(No. 464a)**

Pure essential oil of raspberry is now said to be available. It is described as being very powerful, permitting considerable dilution. **(No. 465a)**

Synthetic lavender oil is said to be suitable for replacing natural oil in perfumes, toilet waters, soaps, and all products which do not require use of U.S.P. oil. **(No. 466a)**

1941 Official Test Insecticide supplies are now available for use in official tests using the Peet-Grady method. New insecticide will remain official until June 1, 1942. **(No. 467a)**

An Algerian Geranium Oil substitute enables soap manufacturers to simulate very closely the odor effect of the natural product at a reasonable cost, according to the manufacturer. **(No. 468a)**

U.S.I. INDUSTRIAL CHEMICALS, INC.
60 EAST 42ND ST., NEW YORK (USI) BRANCHES IN ALL PRINCIPAL CITIES
INDUSTRIAL ALCOHOL IN ALL GRADES AND ALL FORMULAS

In July, 1940 C. L. Gabriel[3] described the large scale production of the nitroparaffins and their derivatives. This opened a new chapter in the development of synthetic organic chemicals. As a result of this work many new chemical products are possible. In the latter part of 1940, 2-amino-2-methyl-1-propanol was made commercially available. For brevity's sake we will refer to this as "A.M.P.". This amino hydroxy compound is an alkaline, colorless, water miscible, rather viscous, ammoniacal odored liquid with a boiling point of 165°C. and has a molecular weight of 89. It forms odorless soaps with the higher fatty acids which, like T.E.A. and morpholine, easily form emulsions with oils and waxes. Considerably less of these soaps are required to make these emulsions with the result that it is an economical emulsifier to use and emulsions are made more uniformly by its use as will be shown later. It volatilizes slowly and produces a wax film not readily re-emulsifiable and hence of excellent water resistance.

Other Emulsifiers

Besides the amines, other emulsifiers may be used but do not find as ready application as the amines. These include fatty acid derivatives or esters of mannitol and sorbitol, glyceryl esters and certain sulfonated bodies. We merely give these passing mention as their use for floor waxes as compared to the amines is more or less limited. Caustic soda and caustic potash are also used in small quantities to aid in making suitable emulsions under certain conditions.

Waxes

The wax content in suitable liquid floor waxes consists almost entirely of carnauba wax. Other waxes like candelilla, montan, beeswax or ceresin do not give as satisfactory results.

Carnauba wax comes from Northeastern Brazil in the part known as "the shoulder." The states of Ceara and Piauhy produce the largest amounts. The carnauba palm (*corypha cerifera*) accumulates a white, dusty coating on the young leaves during the dry season. The fruit, blossoms and young shoots also take on a thin layer of wax. In this way nature protects the tree against evaporation of the moisture inside the plant. The rainy season, where this palm thrives, lasts only a few weeks in a year or possibly two years.

Natives collect the leaves and remove as much of the wax as possible by beating and scraping. This, when melted down, is the better grade carnauba wax. The balance of the wax is recovered from the scraped leaves by dipping them into boiling water. The molten wax is skimmed off and takes a lower grade. Steinle[4] gives an interesting account of the country and methods of production of carnauba wax, as well as the possibility of improving the crude methods of production now used in Brazil.

Carnauba wax is further refined and bleached either by the crude native method or after arrival from the country of origin. When refined, other waxes are usually added to compensate for impurity losses and to facilitate bleaching. Certain countries like Canada will not permit the import of such compounded waxes, except at increased duties.

According to Lewkowitsch[5] pure carnauba wax has a melting point of 85°-86°, acid value of 4 to 7 and saponification value of 79-95. When paraffin is added during the bleaching process, either by the Fullers Earth or bichromate method, the melting point is lowered and the wax is softer. Bleached wax usually melts around 74°C. equivalent to 5 per cent added paraffin. Not only may the addition of paraffin or ceresin be detected by the lowered melting point but also by the high percentage of unsaponifiable matter. If stearic acid is added, a high acid value results. No other wax imparts the same luster and hardness to these floor polish preparations that carnauba does.

The grades of carnauba wax arranged according to cost are Yellow No. 1, Yellow No. 2, North Country No. 2, North Country No. 3 and Chalky. The so-called refined waxes usually undersell the Yellow No. 1. The chalky wax (*arenosa*) has water added to it while being melted. The North Country grade is the same wax without water added and the Yellow No. 1 and No. 2 consist mostly of powder beaten from young unopened leaves.

Other waxes than carnauba, as has already been indicated, occupy a minor place of importance in the making of floor waxes. Waxes like candelilla, montan, mineral waxes, synthetic waxes and beeswax when used impart less slip to the finished wax film but usually tend to dull and soften the finish.

Fatty Acids

Fatty acids are necessary, as has been stated, to produce soaps for emulsification with the amines, like triethanolamine. They should be so selected as to produce the best emulsifying results. Purer fatty acids are now available and producers furnish, at a fair cost, the saturated acids lauric, myristic, palmitic and, of course, stearic acids. The unsaturated acids as good grades of red oil or oleic acid are also readily available.

According to Donnan and Potts[6] the emulsifying power of sodium soaps with hydrocarbon oils is quite dissimilar for various fatty acids. The sodium salts of the lower fatty acids do not emulsify. Up to lauric acid, ineffective emulsifying properties are exhibited because the coagulating action of the Na ions exceeds the effect of the emulsifying tendency due to lowering of interfacial tension. The surface tension changes or activity rises regularly, reaches its maximum with myristic acid, then falls until the C_{26} acid,

[3] *Industrial & Engineering Chemistry*, Vol. 32, No. 7, Page 887.

[4] *Industrial & Engineering Chemistry*, Vol. 28, No. 9 (1936), Page 1004.

[5] *Chemical Tech. of Oils, Fats & Waxes.* MacMillin & Co.

[6] *Theory of Emulsions* (Clayton), Third Ed. Blakiston.

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PARA-DICHLOROBENZENE

CRYSTAL SIZES (shown actual size)

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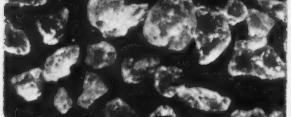

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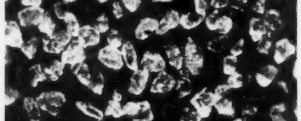

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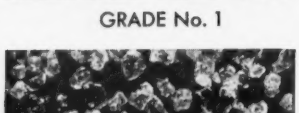

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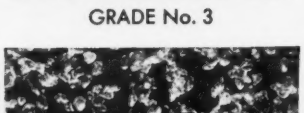

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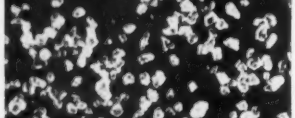

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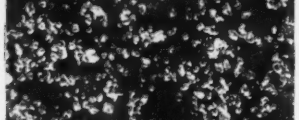

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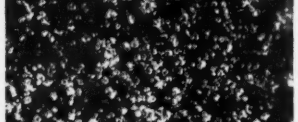

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SOLVAY SALES CORPORATION, 40 Rector Street, New York, N. Y.

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• • • WE'LL DO THE REST . . . We will send you a sample of the grade you check off . . . send you complete information on Solvay Para-dichlorobenzene . . . or if you are uncertain of your requirements, our technical staff is ready to help you select the most efficient grades for your particular purposes. Make use of Solvay service!

cerotic acid, shows no surface activity. Experience in our laboratory indicates a somewhat similar condition with the amine soaps especially when morpholine soap is employed. When this emulsifier is used it is possible to employ the laurates or myristates. If the stearate is used, the heavier soap produces a finished liquid wax which is harder to spread. When the oleate is used, the gloss is duller. With T.E.A. and A.M.P., oleic acid soaps, the gloss of the film is not affected as markedly. The more unsaturated fatty acids from linseed oil or tung oil have a similar action with morpholine to that of red oil.

Gum Resins, Etc.

Gums, resins, lacs, and casein are added to liquid waxes for a number of reasons. They impart non-skidding qualities to the finished waxes, in certain cases increase the shine and build up a thicker, longer-wearing film at less cost than if all wax were used. Glickman[7] lists the gums and resins used for floor finishes together with their characteristics.

Gums may be defined as more or less sticky products exuded by plants and which contain a carbohydrate that is capable of making a mucilaginous mixture with water. The definition does not necessarily imply that all gums are soluble in water as is sometimes stated. Many gums merely swell as viscid mixtures in water and certain of them are soluble in alcohol. They are generally insoluble in waxes and oils.

Resins are a group of hard, brittle vegetable substances, soluble in alcohol but not soluble in water. They soften, then melt to clear liquids when heated and are nitrogen free. Their formation is supposed to be through the oxidation of volatile oils. They consist of mixtures of various compounds. Lacs are resinous substances obtained from certain tropical trees of Asia which when infested by a sucking insect produce a resinous exudation from the insects' bodies. The sap of the plants these insects suck is completely transformed and then secreted by them so that their entire bodies are encased by the resin.

The nature of casein is so well known it needs but passing mention. In preparing a suitable casein for floor waxes it is advisable that a casein, precipitated with lactic acid from the milk, be used.

Shellac was probably the first non-waxy, film-forming product used in floor waxes. This product comes mainly from India and Siam. The crude lac or "stick lac" is the thick excresence on the twigs of the trees, which is collected in this form. This crude lac is scraped off the twigs and partially exhausted of its brilliant red or lac dye with water, after which it is known as "seed lac." This is then further refined by melting and straining and poured in thin films over cylinders or into moulds. It may also be pulled by hand into large, thin sheets. When cooled it is broken into scales which is the orange shellac of commerce. This product contains about 91 per cent resin, 0.5 per cent dye and 1 per cent to 3 per cent wax. It is not generally used as such in floor waxes but is bleached and dewaxed. Shellac is soluble in alcohol and with certain alkalis in water. It changes upon exposure to the air, especially when warm, and becomes insoluble. A mixture of hydroxy acids combined in the form of lactides or lactones probably represents its composition.

A more economical addition to liquid waxes than shellac is Manila resin of the Loba type. It consists mainly of free resin acids, a resin and some essential oils. Certain conifers exude these gums not only in the Philippines but also in the East Indies, Australia and New Zealand. The Manila grade is considered of a better quality than other grades. Manila resin comes into the market as yellowish to yellowish brown lumps of varying size. Like shellac it is rendered soluble in water by certain alkalis after fine grinding and the application of heat.

The use of lactic acid casein is on the increase as a film addition. One difficulty with the casein solution is that it must be prepared a week or so ahead before being added to the polish. For this reason a preservative is also necessary. It is, however, economical to use.

Other gums and resins may be used though shellac, Manila resin and casein continue to be used in the largest quantities. In the selection of any such addition it should always be borne in mind that these products tend to make the finished wax film more brittle and thus may affect its porosity and make it mar more easily.

Other Additions

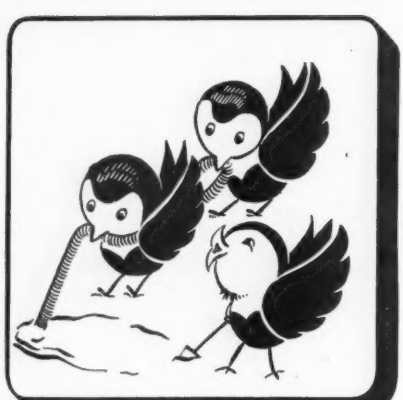
Other additions to waxes used either generally or sparingly are wetting agents, slowly volatile liquids, water and perfumes.

Wetting agents, of which there are numerous ones on the market, are added to make the liquid wax spread over the surface more evenly and are said to produce a more even, brighter film. If the waxes spread more evenly the built-up ridges, formed during application, disappear and the smoother film increases the luster and makes buffing easier. Wetting agents of various kinds differ in their actions so experimental work is necessary to produce the right results. The problem of water resistance should also be taken into account when they are added. It is customary to add anywhere from 0.1 per cent to 1 per cent depending upon which wetting agent is used. It is our experience that if the finished wax is on the acid side no great amount of wetting agent is necessary as this acidity greatly aids in laying down a smooth layer of wax as it is applied. By keeping the wax on the acid side any harmful effect from excess alkalinity toward floor surfaces is also prevented.

Slowly volatile liquids may be added to increase the film luster and improve the shine. If these are used they should be water soluble. Two good additions of this type are

(*Turn to Page* 145)

[7] *Soap.* Vol. 15, No. 12 (1939), Page 109.



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INSECTICIDE COLORATION

ECONOMIC POISONS, THE PREVENTION OF THEIR MISUSE .... BY DISTINCTIVE COLORATION AND OTHER WARNINGS

By Dr. Alvin J. Cox

Chief, Bureau of Chemistry, Calif. Dept. of Agriculture

THE subject of protective coloration of economic poisons is one which is getting increasing attention both from insecticide manufacturers and officials in charge of regulatory work. "Economic Poisons" is merely a term. It is defined in the Agricultural Code of California as "any substance, or mixture of substances intended to be used for preventing, destroying, repelling, or mitigating any and all insects, fungi, bacteria, weeds, rodents, predatory animals or any other form of plant or animal life which is . . . a pest, which may infest or be detrimental to vegetation, man, animals or households, or be present in any environment whatsoever." Intended use rather than character of a material finally determines whether or not it is an economic poison. From the standpoint of poisonousness, any warning should be considered in relation to all uses of a material and not be restricted to economic poisons. This discussion refers to those substances sufficiently poisonous to require an official poison label, whether or not they are used as economic poisons.

Readers of this publication will recall that it has repeatedly emphasized that insecticide manufacturers may soon face a dilemna unless they take prompt action with regard to warning coloration. If manufacturers by agreement among themselves and by cooperation with enforcement agencies will arrive at a system of coloration satisfactory to all concerned they may thereby largely forestall a handicap of improper legislation, and avoid a multiplicity of restrictive legislation by states, cities, and counties, requiring coloration of poisonous substances. It would be an impossible situation if a manufacturer were required to color a roach powder with a half dozen or more colors to suit many variable independent requirements.

A proper label is the best, and generally adequate, protection of the public with regard to the manufacturer's packages of poison. However, labels may become illegible, detached, or handled by the illiterate, and also there is the problem of safeguarding against unlabeled material which has been removed or transferred from the original package. In the case of fumigants, merely a caution regarding the material in its original package does not safeguard against it after being released.

Great progress has been made in the truthfulness of label statements, both as to positive as well as restrictive aspects. Manufacturers generally have cooperated with officials. The label on a product, even more than advertising literature, is the manufacturer's best contact with the user. Some firms have illogically omitted information necessary to the public rather than discuss it with officials and get it into satisfactory form. The presence of adequate directions for use in all conditions, which should include dilution, method, time, dosage, frequency, and duration of application, are all safeguards against misuse of a material. Proper labels now bear, when applicable, precautions such as:

Do not store near foodstuffs.
Do not spray near open flame.
Keep package away from children.
Apply to plants only in the dormant season.
Do not apply to the following plants (or animals)
Do not administer to weak or unthrifty animals
Do not apply within six weeks of harvest.
This product is not compatible with the following:
Should not be applied in hot weather.

In some cases a label may be inadequate, and it is negligence to permit a hazard which it is possible to avoid by proper precautions. With the constantly increasing use of dangerous economic poisons, a manufacturer should employ every reasonable auxiliary means available for protecting the public from confusing them with food. A dangerously poisonous material insofar as possible should carry its own warning. A warning may be inherent in the product, or it may be added. The four senses at our command for this purpose, in order of their importance, are sight, smell, taste, and touch.

Coloration for those who are not color-blind may be an excellent supplement to labeling of poisons so that they will appear different from food. The important consideration in coloring a product is to make obvious that it is not a food or beverage, and is not necessarily to obtain standardization or uniformity of color on specific poisons as a means of differ-

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entiation. Red tags, the red vignette representing the skull and crossbones, have already aroused warning consciousness with respect to economic poisons.

A trace of a repulsive, pungent odor, such as pyridine, in some cases might serve a useful purpose to warn the public of a poison. This may be the only means of protectively warning of the presence of released fumigation gases. This system has been employed to warn against odorless natural gas used by some municipalities.* Since, in general, labeling is properly done, it might be more effective further to depend on the sense of smell and identify an economic poison with a trace of objectionable odor, than multiply dependence on the sense of sight by adding coloration.

Tasting as a method of detecting poisons is not safe for inexperienced persons, but technical men frequently use this as a means of identification; for example, a strychnine grain has a distinct bitter taste. However, an added disagreeable taste might be some protection by preventing a person or domestic animal from eating or drinking enough to be harmful.

The type of container has a bearing on protection. Sale of poisoned bait in a bottle cap or in a container open at both ends has been declared, in California, to be contrary to the best interests of public health and safety. Also we have refused to permit arsenical ant jelly to be marketed in collapsible tubes which might be confused with those commonly used, for food products, for tooth paste, and for other household articles. We hope to get the collapsible tubes that are still in use for any economic poison replaced by safer containers. Several years ago action was taken in California to require the poison label to be placed at the top of any collapsible tube already in use for economic poisons. Previously, in some cases, the poison insignia had been near the bottom where it was covered with the first few rolls of the tube. From time to time other types of unsatisfactory containers have been improved in design to the point where they are acceptable. It has been suggested that the public be educated to associate a triangular, prickled, ridged bottle, or other type of protective package with household poisons.

*Odors have been used to mislead the public; for example, to give a shingle stain the odor of creosote without adding enough to impart a preservative effect.

At the twenty-fifth annual meeting of the National Association of Insecticide and Disinfectant Manufacturers, Inc., held in Washington, D. C., December, 1939, and re-affirmed by the Association a year later, there was unanimously approved, with regard to Nile blue sodium fluoride, as the officially designated product of the Association, a resolution as follows:

> BE IT RESOLVED THAT The National Association of Insecticide & Disinfectant Manufacturers, Inc., recommend to its members, and to all other manufacturers of household insecticides containing sodium fluoride, that only sodium fluoride of a nile blue color be used,
>
> AND THAT such product shall be considered the standard sodium fluoride of this Association.

Bulletin No. 25, February 11, 1941, of the Association reports federal specifications for sodium fluoride O-S-601, August 19, 1930, as amended October 24, 1938, which provides that "sodium fluoride for use as an insecticide shall be colored nile blue. While this does not have the effect of law and is not mandatory with the industry, it is mandatory on all government departments in the purchase of sodium fluoride for use as an insecticide.'"

There is some uncertainty in the information available regarding the coloring of fluoride compounds, the color depending upon whether the material is for agricultural or household use. Such a distinction as this seems unnecessarily confusing unless it were made between (1) sodium fluoride and its mixtures commonly used in households but not on plants, and (2) other fluorine compounds such as cryolite, barium fluosilicate, and sodium fluosilicate, commonly used on plants.

Under Section 1072 of the Agricultural Code of California, "the director may, after hearing, cancel the registration of, or refuse to register, any economic poison . . . which is detrimental . . . to the public health and safety when properly used." This is believed sufficiently broad to require compulsory coloring of economic poisons should the director deem it advisable. In California insecticide manufacturers voluntarily have distinctively colored powdered fluorine and arsenic compounds, as a precautionary measure, and the result appears satisfactory. The color selected for sodium fluoride is nile blue and that for lead arsenates and calcium arsenate is pink. Distinction between heavy calcium arsenate to be used for airplane work and regular calcium arsenate is made by adequate and prominent labeling rather than by another color. Sodium arsenite solutions used for wood-preservation, and the control of termites and of weeds, have been mistakenly used, and caused serious poisonings. In California we are seeking a cheap and suitable means of coloring such materials. Some solutions are so dark-colored they may serve as their own warning. Sodium bichromate would be unsatisfactory as it gives an amber color similar to whiskey. To be satisfactory, a color must be sufficiently evident upon dilution. We have tests under way to determine the permanence in alkaline solutions of a number of dyes submitted by manufacturers for this purpose.

The permanency of certain colors in alkaline sodium arsenite solution containing arsenic trioxide 30 per cent has been investigated. Preliminary data indicate most of the eighteen organic dyes recommended and received from two companies were found apparently stable at a dye concentration of 40 to 100 parts per million. This concentration was sufficient still to impart a distinctive warning color after the alkaline sodium arsenite solution had been colored three months, and was then diluted ten times with water. A

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suitable color for sodium arsenite solution is believed readily available.

IN several other states laws have been suggested to require compulsory coloration of certain economic poisons. The proposals usually provide that it is unlawful to sell any product containing poison used for control of insects, rodents, or other indoor or outdoor pests unless it is colored purple, red, blue, or green, so it may not be confused with foods. Premature legislation of this kind would add confusion. A state wishing to make regulations should see to it that they are broad enough to be reconciled with those of other states.

The best legislation probably specifies no color, but government agencies have been known to require different colors for the same product. The ideal might be to have the same color and insofar as possible a constant odor for all economic poisons. Unfortunately this could not be applied to many household products. The use of carbon black, just enough to throw the product off-white, has possibilities for coloration of economic poisons to make them unattractive as food. No doubt it would be inadvisable to color all poisons strongly black, as such a residue on plants probably would be objectionable to all concerned.

Inasmuch as some pest control materials are incorporated in decorative paints, legislation, agreement or regulation should be sufficiently flexible so that marine anti-fouling or other preservative paint containing arsenic, copper oxide or mercury compounds would not be limited as to desired color, other than by the natural color of the materials themselves. At present agitation for additional protective measures applies more to household economic poisons than to those for field use.

Before any auxiliary safeguard, such as a warning color that does not suggest an edible food, can be logically and generally applied, a great deal of investigation should be carried on. It should not be overlooked that certain colors might attract children rather than warn them. In selecting a protective color, solutions resembling whiskey, wine or other beverage should be avoided. To have a compound colored blue in one instance and green in another might be more hazardous than to fail to color it at all. The choice of color is important. To color a less poisonous substance green might make users more careless with paris green, a deadly poison, and if on vegetables the colored product might be erroneously interpreted as a copper spray residue. A trace of color or odor should be sufficient to indicate that it is not to be used as a food or beverage, and would less likely destroy the usefulness of the material for compounding other products. Certain insects are repelled by some colors, and also some colors may be unacceptable as food to definite species. On the other hand, some colors are attractive to insects. These are broad and important problems, and the effectiveness of the numerous and voluminous agricultural insecticidal and fungicidal sprays and dusts must not be impaired. The economics of the situation also is a factor. The problems can best be solved cooperatively by consultation of all concerned, rather than by haphazard unconsidered compulsion.

The Agricultural Insecticide and Fungicide Association and the Manufacturing Chemists' Association are both greatly interested in the question of coloration and other auxiliary and alternative safeguards. The wide interest even more suggests the useful purpose of coordinating the various activities in order to reduce present hazards from poisons and protect against new synthetic organic chemical compounds as they may appear on the market.

It seems very desirable for the industry to consider the general problem of the protective or warning coloration of poisonous pest control materials, rather than some restricted phase of the matter. The industry can do a great deal to clarify the problem. There are many related products which must be considered eventually and may well be included in some type of general agreement. For example, poisoned grain for the control of injurious rodents and birds has been mistakenly fed to animals and even used for human food with disastrous results. Some manufacturers of such products in California have been coloring (green) one sack out of every twenty before mixing, so about one grain in every twenty of the finished product is prominently colored. The mixture is very distinctive. A similar treatment of poisoned brans used for the control of snails, slugs, cut-worms, grasshoppers, and similar pests has not yet been adopted. Some arsenical ant syrups have been distinctively colored. No action has been taken regarding the coloring of nicotine dusts (usually made with hydrated lime or other white diluent), mercuric chloride (used for treatment of seeds, bulbs, and tubers), tartar emetic (now finding use as a spray for the control of thrips on certain crops), disinfectants resembling water, sodium chlorate (used as an herbicide), or similar pest control materials. Such materials may or may not be included specifically in an industry agreement, but the wording of such an agreement or of state regulations should be so chosen as to avoid confusion of a particular problem with a general one.

There are many things to be decided before a definite color or colors and odor or odors should be agreed upon. These problems should be solved by the industry in advance of legislation. When this is done, instead of opposing legislation, the industry will be in position intelligently to lead to uniform laws and practices throughout the states and other government agencies. A review should be made of the causes of accidental poisoning, and the comparative hazard of economic poisons. Certain non-economic poison pharmacy items taken in undue amounts by irresponsible persons have been the cause of accidental poisoning and even death. The label or other protection is intended to warn against danger in large quantities, and should apply to like materials in like circumstances. The Bureau of Chemis-

(*Turn to Page* 135)

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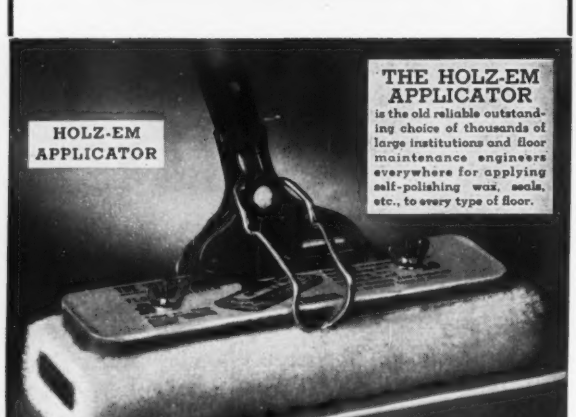
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ROACH CONTROL

A study of the relative efficiency of various commonly used insecticide dusts against roaches

By Hamilton Laudini
and
Harvey L. Sweetman

Massachusetts State College

REPLIES to a questionnaire received from one hundred pest control operators and manufacturers of insecticides regarding the composition of roach powders, formed the basis for a recent discussion of this subject in this publication[1]. A wide difference of opinion was expressed by both pest control operators and manufacturers as to the most desirable insecticide material or combination of materials which should be used. We have tested a number of the materials and combinations discussed in *Soap & Sanitary Chemicals* (1940) as part of a more extensive experiment on insecticidal control of roaches. One portion of this work has been published[2]. The dusts were applied in two ways, both simulating the methods used by pest control operators.

The first method utilized a runway formed by folding a piece of heavy wrapping paper over the edge of a 2″ x 4″ plank 14′ in length. The corners were sharply folded where the paper passed over the edge of the plank. Then two similar planks were laid flat and the folded paper placed between them. Again the paper was folded at the inside top corners of the planks so that a paper runway about 2″ wide, 2″ deep, and 14′ long was formed. Finally strips of glass were laid over the paper and supported by the planks so that the roaches could be observed as they passed along the runway.

When it was desired to make a test, the glass was removed and the dust applied evenly over the bottom and to some extent on the sides of the paper runway with a salt shaker. The size of the openings in the salt shaker was regulated by placing paper under the screw cap and punching holes of the desired size so as to secure an even deposit of dust. The size of the holes was varied depending upon the dust combination that was being used. Approximately four grams of dust were sprinkled in the runway for each test.

The roaches were collected from the stock cages in small wide-mouthed bottles and liberated into one end of the runway. As they emerged at the opposite end, they entered a similar container in which they were retained for observation to determine the speed of action and mortality from the dust. Roaches were forced to pass through the runway with the assistance of a light and by striking the glass above the roach. Generally, little difficulty was experienced in getting them to run through the poison. However, some of the roaches, particularly the German roaches, ran over the dust the full length of the runway and yet very little poison adhered to their bodies. When one test series was completed, the runway was discarded and a clean paper runway set in place. This test should give some indication of the effectiveness and speed of action of the various poisons, comparable to practical control methods where the roaches must run over the dust to be affected.

The second method consisted in placing the desired number of roaches in screen cages about 1′ square and dusting the roaches with a hand duster. This procedure resulted in much more poison adhering to the roaches than in the runway treatments. This method should give results somewhat comparable to applications with mechanical dusters by pest control operators.

The roaches were collected in nearby buildings. Most of them were used immediately following capture, but a few were kept in stock cages for longer periods.

The poisons and combinations of poisons tested are shown in the tables. The pyrethrum and rotenone were fresh products and were kept dry and in tight containers during the period of the experiments. The manufacturers designated the following percentages of active ingredients:

Pyrethrum	0.9	pyrethrins
Rotenone	5.0	
Sodium fluoride	75.0	NaF
	1.5	Na_2SiF_6
Sodium silicofluoride	75.0	
Borax	99.0	

[1]Anon. What composition for roach powders? Soap 16, Nos. 10 and 11:92, 96, 1940.

[2]Sweetman, Harvey L. Tests for toxicity of arsenicals and sodium fluoride to the American roach, *Periplaneta americana* L. Can. Ent. 73:31-34, 1941.

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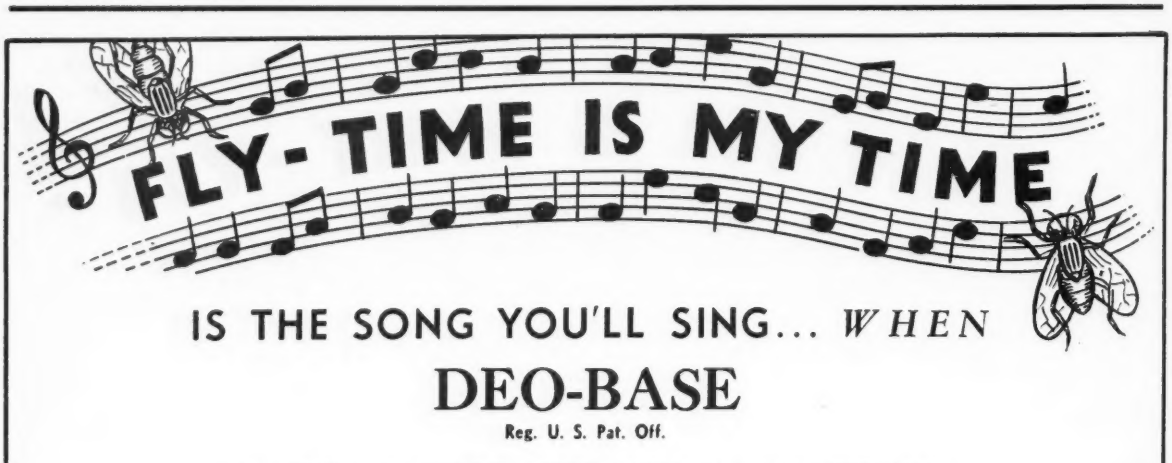

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The effectiveness (percentage of mortality) and speed of action (hours to kill) will be considered in comparing the different compositions of roach powders used in these tests. All tests were conducted at the room temperature and moisture.

Two species of roaches were used in the tests, the American roach, *Periplaneta americana* L., and the German roach, *Blattela germanica* L. Both species of roaches demonstrated that the laboratory and cages used in these tests provided suitable environments. The roaches not only lived for several weeks, but young hatched and survived in the cages. Since the relative effects of the poisons on the two species were somewhat different, the results with each species will be discussed separately.

American Roach

AMERICAN roaches that had passed through the runway dusted with sodium fluoride showed no immediate ill-effects. Their only reaction was to clean their appendages and body, but this also occurs if the roaches are dusted with inert dusts. Therefore, it is possible that sodium fluoride causes little or no chemical disturbance to the roach immediately after application. The average number of hours required to kill with sodium fluoride is rather slow compared to pyrethrum, rotenone, and mixtures of pyrethrum with sodium fluoride, but more rapid than either sodium silicofluoride or borax (Table 1).

Mixtures of pyrethrum and borax killed at about the same rate as sodium fluoride. It seems evident from the data that pyrethrum and borax when mixed acted separately, the early kill being produced by the pyrethrum and the later kill by the borax. However, pyrethrum and borax mixtures were more rapid killing agents than either sodium silicofluoride or borax alone. In only one instance did the time necessary to produce death with pyrethrum or sodium fluoride or mixtures of these compounds approach the amount of time necessary with sodium silicofluoride or borax. These latter two poisons were very slow in producing death.

The effectiveness of sodium fluoride alone as shown by the percentage of mortality in 7 days is somewhat less than most of the mixtures of sodium fluoride and pyrethrum and one mixture of borax and pyrethrum (1 to 1), but far superior to either pyrethrum, rotenone, sodium silicofluoride, borax, or borax and pyrethrum (1 to 3). Pyrethrum, rotenone, sodium silicofluoride, and borax when used alone did not prove to be effective insecticides against the American roach under the conditions of the test. However, the percentage of mortality from borax at the end of 14 days was 100 per cent.

When sodium fluoride, pyrethrum, sodium silicofluoride, and mixtures of sodium fluoride and pyrethrum were applied with a hand duster in the cage treatments, a larger amount and noticeably better distribution of poison on the roaches was obtained than in the runway treatments. Consequently the speed of action was much greater (Table 2). Sodium fluoride and pyrethrum again killed much more rapidly than sodium silicofluoride. Mixtures of sodium fluoride and pyrethrum containing from 17 per cent to 50 per cent pyrethrum killed more rapidly than sodium fluoride alone. Pyrethrum gave a complete kill in 2 days in these treatments, which was superior to that of sodium fluoride in 3 days.

All mixtures of pyrethrum and sodium fluoride containing from 10 per cent to 33 per cent of pyrethrum, with one exception, gave a higher percentage of mortality than sodium fluoride alone. The short duration of the tests may have prevented the development of higher

Table 1. The results from liberating American roaches in a runway treated with various insecticidal dusts.

Hours to kill	*NaF*	*Sodium fluoride* + *pyrethrum* 90 10	87 13	83 17	80 20	71.5 28.5	66.6 33.3	*Pyrethrum*	*Rotenone*	Na_2SiF_6	*Borax*	*Pyrethrum + borax* 75 25	50 50
0-12	..	..	..	..	1	..	..	..	..	..	..	..	..
13-24	1	3	..	1	5	5	12	4	..	..	..	2	1
25-36	3	..	..	1	..	..	..	1	1	..	..	..	..
37-48	5	..	..	1	1	1	5	3	2	..	..	1	3
49-60	1	..	1	1	3	..	..	..	..	..	..	..	1
61-72	2	2	1	..	..	..	2	1	..	..	..	..	..
73-84	..	1	..	..	2	..	2	..	..	..	..	..	..
85-96	1	..	..	2	2	1	1	..	..	..	..	..	..
97-108	..	..	..	..	2	..	..	..	..	..	..	..	..
109-120	2	..	2	1	1	1	..	..	..	1	1	..	1
121-132	..	..	..	..	..	..	..	..	..	..	..	..	..
133-144	7	1	1	..	..	..	..	..	..	..	1	1	1
145-156	..	..	..	..	1	..	1	..	..	..	..	..	..
157-168	1	..	1	..	..	..	..	..	..	..	..	..	..
Survived 7 days.	6	1	2	1	2	0	3	11	5	11	5	4	1
Total	29	8	8	8	26	8	26	20	8	12	7	8	8
% killed.	79	88	75	88	92	100	89	45	38	8	29*	50	88
Average hours to kill ...	87	58	107	62	51	44	42	34	37	112	127	68	86

*100% mortality in 14 days.

Table 2. The results of dusting American roaches with insecticidal dusts in screen cages with a hand duster.

Hours to kill	*Sodium fluoride*	*Sodium fluoride* + *pyrethrum* 90 10	87 13	83 17	80 20	71.5 28.5	66.6 33.3	50 50	*Pyrethrum*	*Sodium silicofluoride*
0-24	21	4	4	9	31	5	32	5	3	0
25-48	8	5	3	1	4	..	..	..	6	3
49-72	3	..	1	..	..	..	2	..	..	3
Survived 3 days.....	8	0	1	1	1	3	6	3	0	3
Total	40	9	9	11	36	8	40	8	9	9
% killed	80	100	89	91	97	63	90	63	100	67
Hours to kill	25	27	29	17	17	15	18	15	29	46

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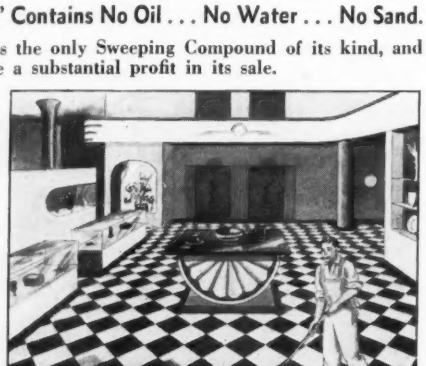

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percentages of mortality from sodium fluoride and sodium silicofluoride.

American roaches tested in the runway with pyrethrum showed immediate responses after passing over the dust. Most of the roaches ran frantically around the glass bottles in which they were retained for observation for several minutes. Frequently they would fall on their backs, being unable to right themselves for the time being. However, many of the roaches eventually recovered sufficiently to regain their feet and a few survived the treatments. Pyrethrum dusted directly on the roaches gave a quicker kill and none of them recovered. The immediate reactions were similar to those treated in the runway.

The speed of action of pyrethrum against the American roach was very rapid, giving a quicker kill than any other insecticide used (Tables 1 and 2). It was very effective when applied directly on the roaches with a duster, but relatively ineffective in the runway tests. Apparently it is relatively ineffective after 3 days also.

American roaches that ran over mixtures of sodium fluoride and pyrethrum showed the combined effects of both poisons (Table 1). The quick, paralyzing action of pyrethrum was evident during the first 2 to 3 days and the prolonged effectiveness of sodium fluoride continued for several days after the pyrethrum had ceased to function. This was most evident when the mixtures contained from 17 per cent to 33 per cent pyrethrum. Higher percentages of mortality resulted from these mixtures than from either poison alone. This mixture is commonly recommended for roach control, which is supported by our results. The increased effectiveness may be due partially to the increased activity produced by the pyrethrum. The amount of moisture given off by roaches treated with pyrethrum, presumably because of increased activity, was evident on the sides of the glass cages, but was not observed on cages containing roaches treated with sodium fluoride alone. This increased humidity may have aided penetration of one or both poisons. With the exception of one test, the time to kill correlated with the percentage of pyrethrum in the mixture (Table 1). Another trend that was evident was the correlation between the prolonged effectiveness and the amount of sodium fluoride, the greater the amount of fluoride the more prolonged the toxic effect. Thus, it appears that the ingredients in these mixtures act separately and mutually in producing mortality of the roaches.

Table 3. The results of liberating German roaches in a runway treated with various insecticidal dusts.

Hours to kill	*NaF*	*Sodium fluoride + pyrethrum* 90 10	87 13	83 17	80 20	71.5 28.5	66.6 33.3	50 50	*Pyrethrum*	*Rotenone*	*Na_2SiF_6*	*Pyrethrum Borax + borax* 50 + 50
0-12 ...	5	2	2	2	..	..	..	..	..	..	..	..	..
13-24 ...	6	1	2	1	5	3	6	4	..	..	..	..	..
25-36 ...	1	1	2	..	1	1	..	2	..	1	1	1	..
37-48 ...	..	..	..	..	..	..	1	..	..	1	..	..	..
49-60 ...	1	1	..	..	..	..	..	..	..	..	..	..	..
61-72 ...	4	..	..	..	..	..	..	..	..	..	3	2	1
73-84 ...	..	1	..	..	..	..	..	..	..	..	..	..	1
85-96 ...	1	..	..	2	..	..	..	..	1	..	..	..	..
97-108 ..	..	..	..	..	..	..	2	..	..	..	..	..	..
109-120 ..	..	..	..	..	..	..	..	..	1	1	1	1	..
121-132 ..	..	..	..	..	..	..	..	..	..	..	..	1	2
133-144 ..	..	..	..	..	..	..	..	..	..	..	..	..	1
145-156 ..	..	..	..	..	..	..	..	..	..	..	..	..	..
157-168 ..	..	..	..	..	..	..	..	..	..	1	..	..	1
Survived 7 days.	0	0	0	0	0	0	5	0	14	2	1	1	0
Total	18	6	6	5	6	6	12	6	16	6	6	6	6
% killed.	100	100	100	100	100	100	58	100	13	67	83	83	100
Average hours to kill ...	32	32	17	43	22	49	20	21	101	73	71	83	117

Table 4. The results of dusting German roaches with insecticidal dusts in screen cages with a hand duster.

Hours to kill	*Sodium fluoride*	*Pyrethrum + NaF* 50% + 50%	*Pyrethrum*	*Sodium silicofluoride*	*Rotenone*
0-12	7	2	..	..	..
13-24	2	6	2	..	..
25-36	..	1	6	..	..
37-48	..	..	..	..	..
49-60	..	..	..	3	2
61-72	..	..	..	..	2
73-84	..	..	..	..	..
85-96	..	..	..	..	1
97-108	..	..	..	..	..
109-120	..	1	..	2	2
121-132	..	..	..	..	..
133-144	..	..	..	..	..
145-156	..	..	..	1	..
157-168	..	..	..	..	..
Survived 7 days	0	0	1	4	3
Total	9	10	9	10	10
% killed	100	100	89	60	70
Average hours to kill....	9	28	29	87	86

German Roach

TREATMENTS of the German roach in the runway demonstrated that sodium fluoride killed rapidly (Table 3). The addition of pyrethrum to sodium fluoride usually increased the speed of action of the powders, but the results are not consistent. Pyrethrum, rotenone, sodium silicofluoride, borax, and pyrethrum and borax were much slower killing agents than sodium fluoride. Sodium fluoride and mixtures of sodium fluoride and pyrethrum, with one exception, killed all of the roaches treated. Pyrethrum alone was very ineffective, but when mixed with borax (1 to 1), 100 per cent mortality resulted. Since borax alone killed a high percentage of the roaches in 1 week, the mortality from the mixture of pyrethrum and borax

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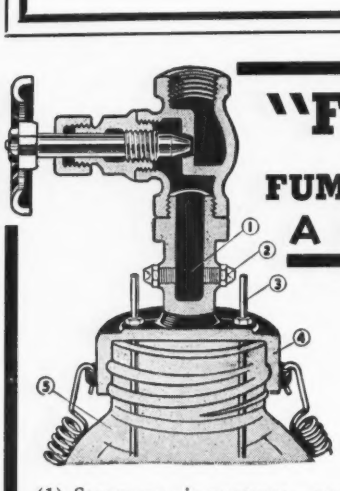

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probably was due largely to the borax. Sodium silicofluoride killed 83 per cent of the roaches, while rotenone destroyed only 67 per cent. Thus pyrethrum and rotenone were relatively ineffective against the German roach under the conditions of the test.

German roaches in cages were treated with sodium fluoride, pyrethrum, sodium silicofluoride, rotenone, and a mixture of sodium fluoride and pyrethrum (1 to 1). Sodium fluoride killed much more rapidly than the other poisons (Table 4). Pyrethrum produced a more rapid kill than sodium silicofluoride or rotenone. Sodium fluoride and a mixture of sodium fluoride and pyrethrum killed 100 per cent of the roaches, while pyrethrum alone also produced a high mortality. Rotenone and sodium silicofluoride were not very effective. Pyrethrum stimulated the roaches to increased activity immediately after treatment in both the runway and cage tests.

The speed of action was greater in the cage tests than in the runway tests. Since noticeably more poison and better distribution on the roaches were obtained in the cage tests, the result was to be expected. Sodium fluoride and mixtures of sodium fluoride and pyrethrum were the most effective under both methods of treatment. Pyrethrum was much more effective in the cage tests, while rotenone and sodium silicofluoride produced similar results in the two tests.

Discussion

THE German roach was much easier to kill than the American roach with the poisons tested. Sodium fluoride was the most effective against the German roach, but was slightly less effective against the American roach. Pyrethrum alone was not very effective against either species in the runway tests, but was very effective if the dusts were applied directly on them. The addition of pyrethrum, from 10 per cent to 33 per cent of the total, to sodium fluoride increased the effectiveness of the poisons against the American roach and gave complete kills against the German roach. Pyrethrum and borax mixtures showed some promise against both species, but the slow action of the borax is objectionable.

Table 5. A comparison of results obtained from laboratory tests with those drawn from statements expressed by pest control operators and insecticide manufacturers.

Poisons	*Effectiveness*		*Speed of action*	
	Lab. tests	*Soap*	*Lab. tests*	*Soap*
Sodium fluoride	90%	Excellent	38 hrs.	Fair
Sodium fluoride + 20% pyrethrum	96%	Excellent	30 hrs.	Good
Sodium fluoride + 28.5% pyrethrum	88%	Excellent	36 hrs.	Good
Sodium fluoride + 50% pyrethrum	88%	Excellent	31 hrs.	Fast
Pyrethrum	62%	Good	48 hrs.	Fast
Rotenone	58%	Good	65 hrs.	Slow
Borax	55%	Poor	105 hrs.	Slow
Borax + 75% pyrethrum	50%	Good	68 hrs.	Fast

*100% mortality in 14 days.

A comparison of the results obtained from our tests and the summary reported in *Soap and Sanitary Chemicals* (1940) are shown in Table 5. The figures in the table were obtained by averaging the data obtained in the runway and cage tests for both species of roaches. Our results for the most part are in agreement with the summary in *Soap and Sanitary Chemicals*.

Sodium fluoride, and mixtures of this material and pyrethrum were considered as having "excellent" effectiveness (percentage of mortality). Our results show this to be true as the lowest percentage of mortality in this group of dusts is 88. Our data show that the other compositions are inferior to the above. However, our figures do not justify giving pyrethrum, rotenone, and borax and pyrethrum mixture (1 to 3) such a high rating as "good." Borax, which was rated as "poor," proved to be nearly as effective at the end of 1 week as those three compositions and at the end of 2 weeks was far superior.

A comparison of the speed of action of sodium fluoride, sodium fluoride and pyrethrum, rotenone, and borax shows that our results correlate quite closely with the speed of action given in *Soap and Sanitary Chemicals* (1940). Pyrethrum, on the other hand, was much slower than sodium fluoride and mixtures of sodium fluoride and pyrethrum, but faster than rotenone and borax. In our tests the quick paralyzing effects of pyrethrum were evident. This fact may be the reason for classifying it as having a "fast speed of action. Since many of the roaches that were "knocked down" lived for many hours, while others recovered and survived the tests, it seems that the "fast" rating is somewhat high for this poison.

Insecticide Coloration

(*from Page* 127)

try of the California Department of Agriculture will be glad to contribute any assistance in this matter that it can.

I suggest that chemical manufacturers and all others interested set up a central cooperative board with representatives from the various states or regions to determine and recommend standard colors and odors, if needed, and how to use them for protection of the public in a manner not detrimental to anyone. This work is necessary as a foundation for any good law, and should be available to forestall premature or harmful legislation.

Floor Polish

A liquid floor polish contains a resinous mass which consists of a mixture of synthetic and natural resins in a solvent containing industrial alcohol. In addition, a ketone, an aldehyde, a glycol and a mixture of high-boiling alcohols may be added. Swiss Patent 205,115.

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NEWS...

NAIDM Releases Wax Report

The wax committee of the scientific committee of the National Association of Insecticide & Disinfectant Manufacturers has just made available copies of a report summarizing the results of tests for per cent non-volatile solids of self-polishing waxes run by ten co-operating laboratories. Remarks from the individual testing laboratories are included. A limited number of copies are available for distribution to members.

Insecticide Goes to War

Special equipment taken along by one of the ambulance groups sent out by the British-American Ambulance Corps to join Gen. de Gaulle's Free French forces in Africa included 1,200 flasks of insect repellent, it was reported recently. The insecticide, it was said, was developed at Rutgers University, New Brunswick, N. J., under a research fellowship provided by National Carbon Co.

1941 O. T. I. Now Available

The 1941 Official Test Insecticide which is official for testing fly sprays by the Peet-Grady Method, June 1, 1941 to June 1, 1942, has just been made available for distribution by the National Association of Insecticide & Disinfectant Manufacturers. The new O. T. I. will be distributed at $5.00 per dozen 6-oz. bottles to members of the Association, plus delivery charges, and to those outside the Association at $6.00 per dozen, plus delivery charges. The 1940 O. T. I. is now obsolete and any remaining stocks should be destroyed.

Gordon Baird Convalescing

Gordon M. Baird, president of Baird & McGuire, Inc., Holbrook, Mass., and a member of the Board of Governors of the National Association of Insecticide & Disinfectant Manufacturers was rushed to the

GORDON M. BAIRD

hospital on May 21 for an emergency appendicitis operation. He was confined to the Weymouth Hospital at South Weymouth, Mass. for two weeks, and has recently returned to his home at 142 Walnut St., Braintree, Mass. Mr. Baird was scheduled to present a paper on "U.S.P. Cresol Compound versus Cresylic Disinfectants" at the mid-year meeting of the N.A.I.D.M. at the Edgewater Beach Hotel, Chicago, on June 9, but this will be presented by proxy. Gordon Baird became president of Baird & McGuire of Holbrook upon the death of his father, C. Campbell Baird late in 1940.

Proprietary Assn. Meets

The supply of botanicals; fungicides for foot baths; and hypersensitivity of chemical products, were among subjects discussed at the fifty-ninth annual convention of the Proprietary Association of America, held May 12-14 at the Biltmore Hotel in New York. Features of the program of the scientific section presided over by Dr. George F. Reddish, Lambert Pharmacal Co., St. Louis, were talks by Dr. Thomas Lewis, of S. B. Penick & Co., New York, Miss Stella M. Costigan, of General Laboratories, Philadelphia, and Dr. H. D. Pease, of Pease Laboratories, New York. Dr. Lewis spoke on "The Future Supply of Botanicals"; Miss Costigan reported on "Fungicidal Studies of Some Products Commonly Used in Foot Baths" in which she outlined a test for evaluating the efficiency of foot baths which had been developed in cooperation with Dr. Klarmann, Lehn & Fink Corp., Bloomfield, N. J.; and Dr. Pease spoke on "Methods for Determining Potential Hypersensitivity of Chemical Products." Dr. F. J. Cullen, of the association, led discussions on labeling, advertising and legislation.

Marshall Clark Marries

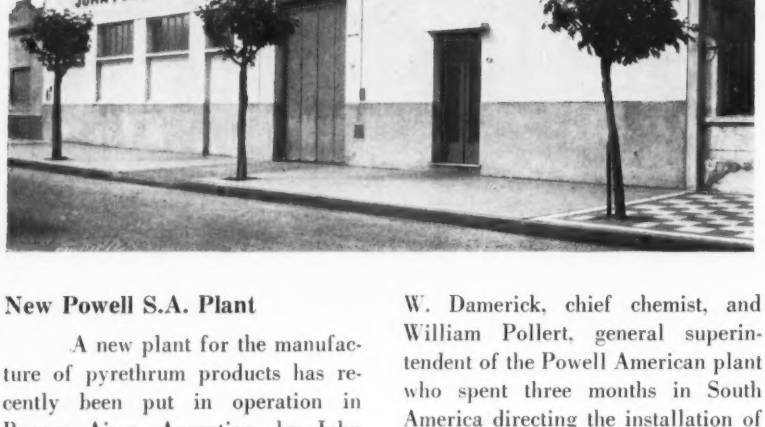
H. Marshall Clark, Dr. Hess & Clark, Ashland, O., manufacturers of farm disinfectants and remedies, was married to Mary Elson, also of Ashland, May 13 at Baltimore. Among the wedding guests were C. P. McCormick and John Curlett, McCormick & Co., Baltimore.

"Carbolineum" Stipulation

Carbolineum Wood Preserving Co., Milwaukee, recently entered into an agreement with the Federal Trade Commission to stop certain representations in the sale of "Carbolineum," advertised for use as a wood preservative and for the destruction of insects. The company has agreed to cease representing that the United States Patent Office has recognized any advantages, exclusive or otherwise, of "Carbolineum" or "Avenarius Carbolineum" as a mite killer, a wood preservative or for any other purpose. The company also agreed to cease advertising that the trademark "Carbolineum" was issued in the name of Carbolineum Wood Preserving Co.

CSA to Golf June 10th

The June 10th golf tournament of the Salesmen's Association of the American Chemical Industry will be held at the Bonnie Brier Country Club, Larchmont, N. Y.



New Powell S.A. Plant

A new plant for the manufacture of pyrethrum products has recently been put in operation in Buenos Aires, Argentina, by John Powell y Cia., a subsidiary of John Powell & Co., New York. The Buenos Aires plant which will serve all of Latin America for the firm is equipped with pyrethrum milling and extracting equipment, and also with complete entomological and chemical laboratory facilities. It is located at 1535 Condarco in Buenos Aires, and is in charge of Edwin B. Twyman, president and general manager who was formerly connected with the export department of John Powell & Co. in New York. The three center figures in the accompanying photo are, left to right, Mr. Twyman, H. W. Damerick, chief chemist, and William Pollert, general superintendent of the Powell American plant who spent three months in South America directing the installation of equipment. The lady on the right is Mrs. Twyman.

Drake Joins M & H Laboratories

Milton J. Drake has recently been appointed chief chemist of M. & H. Laboratories, Chicago manufacturers of self polishing floor wax and other specialties. Mr. Drake, who is a veteran of twenty-one years experience in the manufacture of varnish, lacquer and waxes, will be in charge of production and is enlarging the wax manufacturing facilities of the plant.

New Franklin "Chekit" Folder

Franklin Research Co., Philadelphia, has just brought out a new illustrated folder on its line of "Chekit" wood finishes. Floor treating methods are recommended for various types of flooring, paneling and ceiling.

New Baird & McGuire Product

Baird & McGuire, Inc., St. Louis, has just brought out a new water-soluble hospital disinfectant, "H-D-10," which is said to possess a phenol coefficient of not less than 10 when tested against *B. typhosus* and not less than four against *Staphylococcus aureus*. Triple action, as a germicide, as a deodorant and as a cleanser, is claimed for the new product which is recommended by the company for use as a hand rinse, for disinfection of instruments, as a first aid dressing, as an antiseptic for certain skin infections and for general hospital cleaning and disinfecting. An unusual feature of "H-D-10" is that it acts as a surface tension depressant in water solutions. For all practical purposes, solutions containing 0.5 per cent to 5 per cent of concentrate are suitable for hospital disinfecting, it is said.

Slick-Shine Expands

Slick-Shine Co., polishing fluids and compounds, Newark, N. J., recently purchased a three-story brick structure, a boiler house and a warehouse on property at 207-15 Astor Street, in an expansion move which tripled the size of its present quarters at 179 Van Buren Street. New space aggregates approximately 20,000 square feet. Property is to be taken over by Slick-Shine by August 1st.

DCAT Names Representative

Carson Gray Frailey was recently appointed personal Washington, D. C. representative of the Drug, Chemical & Allied Trades section of the New York Board of Trade. Mr. Frailey will provide individual service to members of the section on problems relating to the federal government.

B-M Introduces "No-Roma"

A new odorless disinfectant has just been put on the market by Baird & McGuire, Inc., Holbrook, Mass., under the trade name "No-Roma." Available in three grades, with phenol coefficients of 2, 5 and 10, the product is described by the company as a non-corrosive and non-poisonous deodorizing disinfectant. In addition to disinfecting and deodorizing, "No-Roma" is said to have the additional property of checking molding and mildewing. It forms a milky-white emulsion in water.

Pioneer Mfg. Modifies Claims

Pioneer Manufacturing Co., Cleveland, recently stipulated with the Federal Trade Commission to cease representing that its product "KO" (Kills Odor) meets all the requirements for a perfect or ideal disinfectant. The company also agreed to stop representing that its preparation will kill all forms of germs within 30 minutes or that it is effective for killing germs suspended in the air.

Survey Insecticide Studies

The division of insecticide investigations, Bureau of Entomology and Plant Quarantine, of the United States Department of Agriculture, recently issued a 90-page outline of the work of the division since 1927. Studies of pyrethrum, derris, cube, and other rotenone-containing plants, other insecticidal plants, synthetic organic insecticides and related investigations are covered in abbreviated form. Included in the report are lists of all the publications, circulars, and articles released by the division and a list of the patents of the division of insecticide investigations.

Independence 1776

Federal Exterminating Co., Chicago, received some newspaper publicity recently when an "Inquiring Reporter" on the *Chicago Daily News* discovered that their telephone number is "Independence 1776." When he dialed this number, the reporter said the young woman who responded said "Independence 1776, the patriotic telephone number." The company's slogan, he also learned, is "Freedom From Pests."

Fuld Superintendent Dies

Henry E. Hamburger, superintendent of Fuld Brothers, Inc., Baltimore, died suddenly on May 4, following a stroke which afflicted him two days earlier.

Modifies "Shur-Deth" Claims

V. H. Bean and M. C. Bean, trading as St. Clair Co., Findlay, Ohio, have just entered into a stipulation with the Federal Trade Commission to stop representing that "Shur-Deth," a rat-killing preparation, will drive rats and mice outside to die; is the most effective raticide known; is the original preparation of rat foods in combination with red squill, and is recommended by the U. S. Department of Agriculture.

Cardinal Chemical Moves

The plant and main office of Cardinal Chemical Co., Ltd., Toronto, industrial maintenance products, has just been moved to 49 Lesile Street.

New Fuld Bros. Catalog

A new catalog of the Fuld line of sanitary chemicals and floor maintenance products for the jobber has just been brought out by Fuld Bros., Baltimore. In preparation for three years, the catalog contains 147 descriptive pages and also describes the Fuld service to jobbers.

New du Pont Pest Control Lab.

Completion of a three-story laboratory and office building, to be devoted to pest control research, at the du Pont Company's Experimental Station at Wilmington, Del., was announced May 20. The new building replaces a smaller structure in which the laboratories have been housed since 1937. The new unit has been designed to permit the closest possible coordination of experimental and practical work, according to Dr. Wendell H. Tisdale, director. Confirmation of laboratory conclusions by field tests, he said, is regarded as an essential of the program.

One laboratory is devoted to the compounding of experimental chemicals for application as sprays or dusts. Special consideration is given to the development of spreading and sticking agents and other assistants including inert carriers. Another laboratory is specially equipped to carry on exploratory work on fungicides and bactericides. The study of termite control also is conducted in this laboratory.

An insectary for raising flies occupies one room, adjacent to an improved type of "lethal chamber," for testing of household insecticides. It is said to eliminate some of the difficulties experienced with the standard type chamber used in other laboratories. Another chamber equipped with automatic temperature and humidity control is provided for rearing codling moth larvae and conducting comparative tests of chemicals. A room in the basement of the greenhouse is devoted to special equipment used for testing chemicals against the Japanese beetle and other insects.

L. A. Taylor Changes Address

Leon A. Taylor Supply Co., insecticides, formerly of Lapeer, Mich., recently moved to 1743 N. Saginaw Street, Flint, Mich.

Chemical Mfg. Sales Moves

Chemical Manufacturing Sales Co., sanitary products, Chicago, formerly located at 5307 S. Blackstone Ave., has just moved to the Empire building at 3958 S. Calumet Ave.

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WAX SOAP CLEANER
MARBLE & TERRAZZO CLEANER
YOUR LABEL
PENETRATING WOOD SEAL
GYM SEAL
FURNITURE POLISH
Quality Finishes Under Your Own Label
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Franklin Research Co. offers a complete PRIVATE LABEL service—designing (if desired) and putting on your label, helping in the design of your sales literature, providing trained factory men to help you in specific floor problems, supplying you with dependable products that are consistently good because of rigid laboratory and factory control.
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CRESYLIC ACID — FORMALDEHYDE

AROMATICS

Phenyl Ethyl Alcohol	Phenyl Ethyl Acetate
Methyl Acetophenone	Amyl Cinnamic Aldehyde
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For Soaps, Perfumes, Cosmetics, etc.

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180 MADISON AVE., NEW YORK

McCormick Co. Elects Board

The board of directors of McCormick & Co., Baltimore, insecticides, elected for the coming year at a recent meeting is as follows: Charles P. McCormick, president; William L. Bean, secretary-treasurer; George M. Armor, John N. Curlett, J. G. Luttrell, and N. C. Settle, vice-presidents; W. M. Davis, Fred W. Ensey, C. L. Fardwell, Brooke E. Furr, Lester W. Jones, Conrado E. DeLamar, and J. F. Welsh. Last month the company paid an extra dividend of $1.00 a share in addition to its usual dividend of 50 cents a share, on common stock outstanding as of April 15, 1941.

Cadie at Premium Show

Cadie Chemical Products, Inc., promoted their "Moth Vamoose" sachets for premium use in a display at the 11th National Premium Buyers Exposition in Chicago last month. Other items exhibited in their booth included Cadie cloth chemical polishes, liquid silver polish and liquid shoe white. Alfred J. Meyers, Cadie president, was in charge of the presentation.

Parke, Davis Income Up

Parke, Davis & Co., Detroit, recently reported net income for the quarter ended March 31, 1941, of $2,115,504, equal to 43 cents a capital share. For the comparable 1940 quarter, income was $2,041,035, or 42 cents a share. For the twelve months ended March 31, earnings were $8,342,181, or $1.70 a share, as compared with the previous twelve months net income of $8,599,765, or $1.75 a share.

Insecticide Stipulation

Harry Douglas, trading as Magic Chemical Co., Baltimore, recently stipulated with the Federal Trade Commission that in the sale of his product "Magic" insecticide, he will cease using the words or phrases "forever," "rids them" or "never to return," or similar words so as to imply that application of the product will afford permanent protection against bedbugs, cockroaches or other insects. The stipulation relates that the product's effectiveness is limited to destruction of insects which it contacts and that the preparation will not afford permanent protection.

Adams Names Cuba Distributor

Vincent P. Adams, president of V. P. Adams, Inc., Jamaica, N. Y., sanitary products, recently appointed Sucs. de Pablo M. Costas, Havana,

M. MIGUEL and V. P. ADAMS

Cuba, as distributors of its line of disinfectants, cleaners, floor finishes, deodorants, etc. Miguel Miquel represents the distributing firm.

Seek New Derris Source

H. T. Edwards and J. H. Kempton, tropical plant specialists of the United States Department of Agriculture, left Washington May 15 for an agricultural survey of Mexico and other Central American countries which may pave the way for development of new raw material sources for manufacturers of insecticides. The survey is being made to investigate possibilities of developing in the American tropics products which the United States now import from more distant tropical regions. The Department of Agriculture listed derris, imported from the East Indies for use in insecticides, as among the important plants that might be developed in Central America.

Distribute Termite Booklet

"How To Detect Termites" is the title of a 16-page booklet offered by the E. L. Bruce Co., Terminix division, Memphis, in ads appearing in five nationally circulated publications on behalf of the company's termite exterminating products and services.

HCN Kills Ship Fumigators

Arthur J. Hanna, an inspector of the steamship sanitation division of the United States Public Health Service, and Joseph Billings, president of Steamship Sanitation Co., New York, were killed by hydrocyanic acid fumes while fumigating the Lloyd Brasileiro liner *Jaboatao* on May 10, at a Hoboken, N. J., pier. Newspaper accounts reported that neither had used his gas mask. Firemen hauled them out of the hold two hours after they had been overcome.

Stops "Absorbine, Jr." Claims

The Federal Trade Commission has just accepted from W. F. Young, Inc., Springfield, Mass., a stipulation in which it agrees to cease claiming that "Absorbine, Jr." kills fungi of athlete's foot that are buried beneath the corneous layer of the skin. The Young company also agrees that it will cease representing that the product has any effect upon tissues deeper than those supplied by the peripheral vascular system or that accepted laboratory tests have proved that it achieves such results. According to the stipulation, while it is contended that the preparation kills the fungi of athlete's foot on contact, such fungi, during certain stages of development, are buried beneath the corneous layer of the skin and are then inaccessible to the product.

Pynosol Labs. Move

Pynosol Laboratories, Inc., disinfectants, formerly of 215 N. Aberdeen Street, Chicago, recently moved to 1714 S. Ashland Ave.

Colorado Insecticide Act

Insecticides must be registered in Colorado as a result of the passage of Colorado House Bill 454 which will become fully effective July 1, 1941. The registration fee will be $2.00 for each item or brand registered but any registrant may pay a lump sum of $25 covering all his brands or items manufactured or distributed within the state. Registration forms are available.

You Can
Sell More Soap
with the right dispenser

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BOBRICK
Offers You

29 different models

A model for every type of installation.

No. 21
Unbreakable
PLASTIC Body

Fastest-Selling Model

Medium Price Class . . . . .

Refreshingly new in design. Has many features of higher priced models. No washers—unbreakable spring. This is the dispenser many jobbers and soap manufacturers are using to open up NEW soap accounts! To *show* it is to *sell* it!

No. 13-U
Push-up

Priced LOW as the lowest

Ideal for a Deal . . . . . .

For the class of trade who demand a low-priced dispenser. The Bobrick No. 13-U comes equipped with the new "Duraglas" globe—practically unbreakable. Big value for the small amount of money it costs you!

No. 31
Indestructible

For POWDERED Soap

New Factories are buying . . .

You can sell the No. 31 *anywhere* because it dispenses ANY kind of powdered hand soap. This outstanding feature sells this model to new factories, buildings, schools, service stations, etc. Well made to stand rough use!

Write today for Complete Catalog showing 29 different models.

BOBRICK MFG. CORP.

"Selling The Jobber and Soap Mfgr. Only"

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New York City

2619 Santa Fe Ave.
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CRESOLS
... U. S. P., Meta Para, Ortho, special fractions.

CRESYLIC ACIDS
... in various distillation ranges—for all uses.

TAR ACID OILS
... in all grades, from 10% to 75% tar acid content—carefully blended.

XYLENOLS
... Low boiling, high boiling, symmetrical.

NAPHTHALENE
... Crude (70°C. to 78.5°C. melting point) and Refined White Naphthalene melting above 79.4°C., in chipped, crystal, flake and powdered form.

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COAL TAR PRODUCTS

15 PLANTS
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Offer New Floor Seals

Polio Laboratories, Inc., a division of Buckingham Wax Corp., Long Island City, N. Y., recently announced the development of two new floor products: "Wax Lac," a penetrating floor seal that is described as capable of varnishing and waxing in one operation, and "Gloss-Lac," a new finish for wood floors, said to be scratch-proof, non-skid, alcohol and water proof and a quick drying product with high gloss. These materials were developed by Dr. Marshall de Bouillion, research chemist with many years experience in United States and abroad, who is associated with Buckingham Wax Corp.

Fritzsche Bros. Elects

H. P. Wessman, director of purchases, Dr. Ernest S. Guenther, chief research chemist, and Joseph A. Huisking, assistant to the president, were elected vice-presidents of Fritzsche Brothers, Inc., New York, at the annual election of officers held May 1 at the offices of the company. Dr. A. Nicolaus, in charge of manufacturing operations in the company's plant at Clifton, N. J., was chosen a director to succeed the late B. F. Zimmer. Officers re-elected were: president, F. H. Leonhardt; vice-president and treasurer, W. A. R. Welke; vice-president, George L. R. Ringel; and secretary, John Montgomery.

N. Y. Exterminators Meet

Representatives of all New York exterminating and fumigating firms were called by the New York Department of Health to a general meeting to discuss rodent and other vermin extermination and prevention on May 7. Detailed instructions on approved procedure for rat control and rat proofing from the viewpoint of the Health Department were given in addresses by deputy commissioner Sol Pincus, Dr. John Oberwager, chairman of the fumigant board, Dr. Edward Bocker, of the fumigant board, and B. Holsendorf, who is to instruct health inspectors in rat control technique. William O. Buettner, secretary of the National Pest Control Assn., and M. H. Oachs of Ozane Co., spoke and answered questions from the floor. An outstanding note brought out at the meeting was the recognition of need for more publicity on the rat control question. Dr. Oberwager appointed a committee including Mr. Buettner representing the N. Y. Pest Control Association, and Mr. Oachs representing the Professional Exterminators Association of New York, to work out an approved technique for rat control and rat proofing. This committee is to confer with the fumigant board, of which Dr. Oberwager is chairman.

Nitrile Insecticides

Trichloroacetonitrile has been found to kill bugs, cockroaches and mites at a concentration of 30 grams per cubic meter in 8 hours at temperatures above 20° C. Moths were killed at higher concentrations. The compound is noninflammable, noncorrosive and easily evaporated. It is less poisonous for humans, but is irritating in concentrations of 5-10 mg. per cubic meter. Other nitrile and halo-nitriles were also found to have very good insecticidal properties. G. Peters. *Chem.Ztg.* **64,** 485-6.

Continental Features Insect Ad

"A Home Defense Program Against All Insects" is the theme Continental Can Co., New York, is featuring in its advertising for the June 14th issue of the *Saturday Evening Post* to call attention to the products of the insecticide industry. A blitzkrieg on "filth columnists" is urged for the early summer months. Consumers are also advised on the best methods to use in spraying insecticides. Continental will supplement this advertising with direct mail and promotional material to be distributed to the trade.

NOW'S THE TIME FOR HOME DEFENSE!
Insecticides – one of the many good things you buy in cans
What next in cans?
CONTINENTAL CAN COMPANY
IF YOU PUT A PRODUCT UP . . . PUT IT UP TO CONTINENTAL

Quality SHELLAC

For Better No Rubbing Waxes

OUR No. 65 EXTRA WHITE REFINED BLEACHED SHELLAC has been adopted by discriminating manufacturers of No Rubbing Waxes.

BECAUSE—It will dissolve quicker and require less Alkali thereby producing more durable, more water resistant and higher gloss finishes.

We invite your shellac problems.

THE MANTROSE CORPORATION

136-146 41st STREET — BROOKLYN, N. Y.

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Penn-Drake INSECTI-SOL

Deodorized insecticide solvent

You can't find a better solvent than Penn-Drake INSECTI-SOL. With this Pure Pennsylvania base, you can offer an insecticide with 3 powerful sales-building features:

1. Always Odorless
2. 100% Volatile
3. Quicker Kill

Yet genuine Penn-Drake INSECTI-SOL COSTS NO MORE than ordinary bases!

Write today for full information and prices.

And the Perfect Base for Mothcides is Penn-Drake DEODORIZED NAPHTHA

PENNSYLVANIA REFINING CO.
BUTLER, PA.

Insects for the Layman

"Introducing Insects—A Book for Beginners," by James G. Needham, emeritus professor of entomology, Cornell University, is just what its name implies—a book intended for people who want a little information about common insects presented in language that anyone can understand. It is generously illustrated with sketches and written in an easy, familiar style with all technicalities omitted. As the book is strictly for the amateur entomologist, pest control is stressed only lightly.

Specifications for Derris

Previous official specifications are revised to provide for no more than 10 per cent of moisture and 8 per cent of ash. The fineness is 90-95 per cent through 200 mesh. The rotenone content should be 5 per cent with a 12-15 per cent ether extract, and 10 per cent with a 20-25 per cent ether extract. W. Spoon. *Indische Mercuur* **63,** 203; through Chem. Abs.

Automobile Polish

The following paste polish was accepted by Zis auto works: Water 16.4 per cent, household soap 4, glycerine 6.75, kerosene 19.3, dibutyl phthalate 3.6, and abrasive 50 per cent. The paste was homogenized in a paint mill. S. A. Uranov. Byull. Obmena Opyt. Lakokrasochnoi Prom. 1940, No. 6, 22-4; through Chem. Abs.

Soap vs. Oil Prices

(*from Page* 31)

Presuming that coconut oil supplies might be cut off we could not count on palm-kernel oil to plug the gap, since it also depends on ocean transport. Use of babassu oil then would seem to be the most logical alternative to use of coconut oil as a quick-lathering stock. Failing this, soapers in the United States would be obliged to turn to increased use of cottonseed oil for its lathering qualities, as the most appropriate oil of this type among those produced within the continental limits of the country.

Imports of palm oil are being affected by the shipping situation in the Pacific to much the same extent as imports of coconut oil. Imports, however, for the first quarter of 1941 were high as compared with the previous quarter and with the comparable 1940 quarter. For the first three months of 1941 imports of palm oil totaled 35,871 tons as compared with 22,411 tons for the quarter ended March 31, 1940, and with 21,316 tons for the quarter ended December 31, 1940. Thus for the last quarter for which records are available, imports were not affected adversely. Since the end of March, however, shipping space has become increasingly difficult to obtain for all the imported vegetable oils used in soap manufacture. It has been this factor more than any other which has been responsible for the general price advance of all fats and oils.

The shipping situation, in turn, is of course a direct result of the progress of the European war, as is essentially every other phase of the present economic picture. What the ultimate outcome will be as far as fat and oil prices are involved is a matter of conjecture. Any number of things could happen to push prices to still higher levels, but there are several factors working to prevent prices from soaring to the record heights of the days of World War I and afterwards. One is the already mentioned factor of the changed position of glycerin in the wartime scheme of things. Another is the Office of Price Administration and its yet untested ability to control prices as effectively as will become necessary if the traditional wartime pressure on prices develops. A further important control is that a great part of the normal fat-consuming world is cut off from supplies by the British blockade. With United States the only big open market, it is inevitable that the stocks which would normally go to Europe will gravitate in our direction if transport facilities can be found.

Insecticide for Spiders

Insecticides suitable for combating soft-bodied insects, such as spiders and allied pests contain a dinitro dialkyl phenol such as dinitro diamyl phenol, or a salt of such a compound. Am. Moore, to American Cyanamid Co., U. S. Patent No. 2,222,486.

Mosquito Smudge

A composition which when burned gives off a light smoke for driving off mosquitoes and similar insects, is formed of charcoal, resin, wood tar and vegetable pulp mixed with enough water for molding under pressure. Frank A. Waples. U. S. Patent No. 2,224,622.

Mothproofing Solution

Fabrics composed substantially of animal fibers are mothproofed by immersion in a dilute aqueous bath containing an ammonium or magnesium fluosilicate, a lesser amount of tartar emetic, aluminum sulfate, and a wetting agent such as a sulfonated higher alcohol. Lawrence W. Roberts. U. S. Patent No. 2,225,352.

Liquid Floor Waxes

(*from Page* 121)

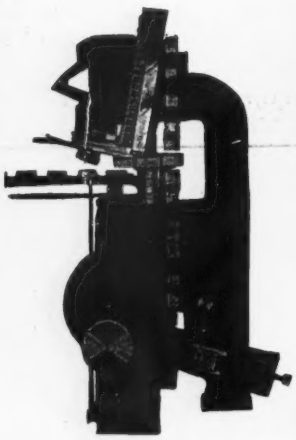
isopropyl alcohol and cyclohexanol. They should be used in slight amounts, added to the molten wax during manufacturing operations.

Water is, of course, a very important addition to liquid waxes. The amine soaps like soda soaps are thrown out of solution by hard water by its lime content. Failure to make a good liquid wax may be attributed at times to hard water. For this reason softened water should be used in making these emulsions. It is not necessary to use distilled water but the water should be so softened that it is soft when tested by the usual standard soap solution.

Liquid waxes are not generally perfumed but if the odor appeal is desired there is no reason why a suitable compounded perfume should not be used. It gives an additional sales talking point.

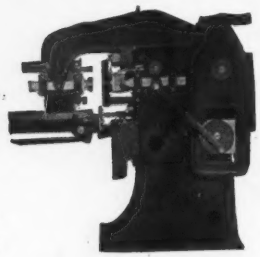
(*To Be Concluded*)

Special Offerings of SOAP MACHINERY *Completely Rebuilt!*

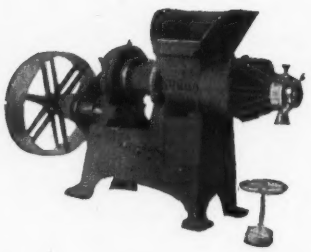


Small size fully automatic Jones toilet soap press. Capacity 150 to 200 small cakes per minute. A real buy at an attractively low price. Has been completely rebuilt in our own shops.

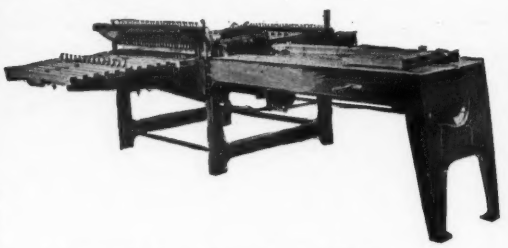
H-A SOAP MILL
This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.



4 JONES AUTOMATIC combination laundry and toilet soap presses. All complete and in perfect condition.



Single screw soap plodders with 6, 8, 10 or 12 inch screws. All completely rebuilt and unconditionally **guaranteed.**



2 Automatic Power Soap Cutting Tables.

INVESTIGATE THESE SPECIAL BARGAINS

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Johnson Automatic Soap Chip Filling, Weighing and Sealing Machines for 2 lb. and 5 lb. Packages guaranteed in perfect condition.

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ADDITIONAL REBUILT SOAP MACHINERY

All used equipment rebuilt in our own shops and guaranteed first class condition.

- H-A, 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.
- Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.
- Ralston Automatic Soap Presses.
- Scouring Soap Presses.
- Empire State, Dopp & Crosby Foot Presses.
- 2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.
- H-A 4 and 5 roll Steel Mills.
- H-A Automatic and Hand-Power slabbers.
- Proctor & Schwartz Bar Soap Dryers.
- Blanchard No. 10-A and No. 14 Soap Powder Mills.
- J. H. Day Jaw Soap Crusher.
- H-A 6, 8 and 10 inch Single Screw Plodders.
- Allbright-Nell 10 inch Plodders.
- Filling and Weighing Machine for Flakes, Powders, etc.
- Steel Soap frames, all sizes.
- Steam Jacketed Soap Remelters.
- Automatic Soap Wrapping Machines.
- Glycerin Evaporators, Pumps.
- Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.
- Perrin 18 inch Filter Press with Jacketed Plates.
- Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.
- Day Grinding and Sifting Machinery.
- Schultz-O'Neill Mills.
- Day Pony Mixers.
- Gardiner Sifter and Mixer.
- Proctor & Schwartz large roll Soap Chip Dryers complete.
- Doll Steam Jacketed Soap Crutchers, 1000, 1200 and 1350 lbs. capacity.
- Day Talcum Powder Mixers.
- All types and sizes—Tanks and Kettles.
- Ralston and H-A Automatic Cutting Tables.
- Soap Dies for Foot and Automatic Presses.
- Broughton Soap Powder Mixers.
- Williams Crutcher and Pulverizer.
- National Filling and Weighing Machines.

Send us a list of your surplus equipment— we buy separate units or complete plants.

NEWMAN TALLOW & SOAP MACHINERY COMPANY

1051 WEST 35th STREET, CHICAGO — Phone Yards 3665-3666

Our Forty Years Soap Experience Can Help Solve Your Problems

CLASSIFIED ADVERTISING

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 254 West 31st St., New York.

Positions Wanted

Soapmaker & Chemist—man with long experience as superintendent in factories making all kinds of soaps, recovery of glycerine, etc. Also know rendering business. Address Box No. 149, care *Soap*.

Soapmaker—Years of experience in making all types of soaps. Record and references on request. Address Box No. 146, care *Soap*.

Salesman—34 years old. Married, at present employed and desires change, selling mainly to the retail and wholesale paint, hardware, paper trade, selling a line of waxes, polishes, insecticides, paint specialties. Experienced in line. Good contacts. Volume business. Proven ability in Metropolitan New York and New Jersey. With present firm nine years. Address Box No. 152, care *Soap*.

Positions Open

Wax Chemist—Man with experience in the manufacture of floor waxes and other floor products desired by an old well-established company specializing in these products. Good opportunity for right man. Give details, salary, experience, etc., to Box No. 154, care *Soap*.

Salesmen—Liberal drawing account and commission for experienced salesmen of floor waxes, cleaners, seals, etc., to schools, hospitals and industrial plants. Opportunity to advance in first-rate, established manufacturing organization. Write to Box No. 150, *Soap*, stating experience. Replies confidential.

Sales Organizer—Long-established manufacturer wants sales executive experienced in hiring salesman of floor treatment products in school and institutional field. Excellent opportunity for topnotch man. Write Box 151, care *Soap*, giving experience and qualifications. Replies will be treated in confidence.

As Never Before . . .

• YOU SAVE TIME
• YOU SAVE MONEY
with CONSOLIDATED
Rebuilt Equipment

SELECTED SPECIALS

2—Pneumatic Scale Carton Packaging Units.
1—Sargent 54" x 72" single Chilling Roll.
2—Proctor & Schwartz Soap Chip Dryers, steel frame; 1 with single cooling roll.
1—Houchin Para Block Press, with sliding die.
1—Soap Foot Press.
2—Jones Vertical Automatic Soap Presses.
1—Jones Horizontal Automatic Soap Press.
3—Houchin Plodders, 10", 8", 4"
1—Automatic Soap Wrapping Machine.

Crutchers	Foot and Automatic Soap Presses	Filter Presses
Soap Kettles	Cutting Tables	Soap Frames
Powder Mixers	Pulverizers	Powder Fillers
Granite Mills	Soap Pumps	Labellers
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We buy your idle Machinery—Send us a list.

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Let us manufacture it for you!

Those products which you are not equipped to manufacture yourself . . . those odd items which do not fit into your plant . . . mosquito repellent, flea powder, salves, ointments, tube filling, powder filling, etc. . . . we buy materials, containers, pack, store, and ship your specialties . . . most modern methods and equipment . . . strictly confidential . . . and our charges are low . . . consult us without obligation.

R. Gesell, Incorporated
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206 W. HOUSTON STREET NEW YORK

We announce development of new type soap colors

PYLAKLORS

They have good fastness to alkali, light, tin, ageing.

The following shades are already available:

Bright Green	Dark Brown
Olive Green	Palm Green
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True Blue	Violet

It will pay you to send for testing samples.

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Manufacturing Chemists, Importers, Exporters

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"Steamaster"
INSECTICIDE SPRAYER

With steam serving both as an ingredient and as a force, the insecticide itself is held in moist suspension and the attack is made at full strength . . . thus guaranteeing a 100% thorough job of pest extermination. Completely enclosed heating element. Operates from any electric outlet. No fire hazard. Current shuts off automatically when water level drops below the level of the heating element.

A. C. ONLY

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Manufacturers to the Wholesale Trade Only

CRESYLIC ACID

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HIGH BOILING TAR ACIDS

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TAR ACID CREOSOTE OIL

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NAPHTHALENE

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MIRVALE CHEMICAL CO., Ltd.

MIRFIELD YORKS, ENG.

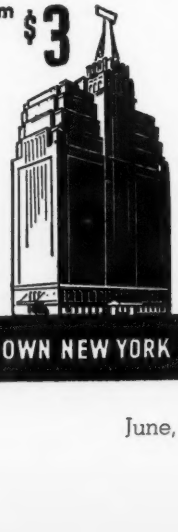
Finest Subway Entrance to all Points of Interest

New York's Popular
HOTEL LINCOLN
44TH TO 45TH STS. AT 8TH AVE.

OUR CHOICEST ROOMS From $3

1400 ROOMS each with Bath, Servidor, and Radio.

★ Four fine restaurants awarded Grand Prix 1940 Culinary Art Exhibition.



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PRESIDENT
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HOTEL EDISON
SAME OWNERSHIP

IN THE CENTER OF MID-TOWN NEW YORK

Entomologist—Wanted by large producer of insecticide materials, an entomologist with several years practical experience in the insecticide industry. Give full details in letter to Box No. 142, care *Soap*.

Wanted—Chemist: Man who is willing to go to South America for six months to direct opening new plant for the manufacture and refining of toilet soaps, margarine, etc. Experience in oil and fat refining and processing essential. Give other details to Box No. 143, care *Soap*.

Chemist—Wanted by leading insecticide material supply house, young chemist to break in to a modern laboratory; a man preferably with previous insecticide experience. Opportunity for young man to work his way into good company. Reply, giving details, experience, salary, etc. Address Box No. 145, care *Soap*.

Miscellaneous

Wanted—One good Soap Dryer, complete; crutcher, and miscellaneous soap manufacturing equipment. Address Box No. 155, care *Soap*.

Cincinnati Firm would be interested in representing established firms offering materials for the soap industry. Address Box No. 147, care *Soap*.

For Lease—Small soap plant, 12,000 sq. ft. with small office building, plenty yard room, own water supply, boilers, two large and small kettles, railroad siding, within 100 miles New York. Ready to operate. Will lease to responsible firm, or will operate ourselves to manufacture soap or similar products for sales organization. Exchange of references and full investigation both sides. Write to Box No. 153, care *Soap*.

For Immediate Delivery—Houchin-Aiken No. 4 foot press with feed and die; 1,000 and 1,200 lb. Soap Frames; 12 in. to 24 in. Filter Presses; Kiefer Mono-Scale Filler; etc. What have you for sale? Machinery & Equipment Corp., 59 E. 4th St., New York City.

Floor Brushes—We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

Will Purchase Immediately—Pneumatic Packaging Machine, used for chips, powder, cleanser; also dry mixers, chip dryers, crutches, and automatic soap press. Address Box No. 148, care *Soap*.

F. & S.

Quality Colors
for
TOILET SOAPS
LIQUID SOAPS

TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

FEZANDIE & SPERRLE, Inc.
205 FULTON STREET
NEW YORK, N. Y.
Import—Manufacture—Export

A New Departure In Crutcher Performance

The HUBER ELECTRO PERFECTION CRUTCHER is now available in a new model,—with four forward and reverse speeds. The flexibility in operating technique afforded by this wider choice of crutcher speeds should be decidedly interesting to many soap makers. Available in three sizes,—1,500, 2400 and 3200 pounds.

HUBER MACHINE CO.
"Builders of Good Soap Machinery for the Past 45 Years"
265 46th STREET BROOKLYN, N. Y.

"Good" Disinfectants

Pine Oil Disinfectants Coefs. 3 and 4

Phenolic Emulsifying Disinfectants Coefs. 2 to 20

Soluble Cresylic Disinfectant
Coef. 2.5 (B.A.I. Specifications)

Saponated Solution of Cresol
U.S.P. XI (Cresol Compound Solution)

All made under careful laboratory control. Phenol coefficients determined by LaWall and Harrisson Laboratories.

Other "GOOD" Products

Insect Sprays	Vegetable Oil Soaps
Cattle Sprays	Liquid Soaps
Bed Bug Sprays	Scrub Soaps (Liquid & Jelly)
Agricultural Insecticides	Floor Wax and Polishes

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JAMES GOOD, INC.

Manufacturing Chemists—Since 1868

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TAR ACID OIL

for use in

DISINFECTANTS

Makes White Emulsions.
Unusually High in Tar Acids

MANUFACTURED FROM
LOW TEMPERATURE COAL TAR

PITTSBURGH COAL CARBONIZATION CO.

H. W. Oliver Building Pittsburgh, Pa.

Producers and Refiners of Coal Tar and Its Products.

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. . . and other insecticide specialties for the agricultural and household trades.

•

. . . paints, polishes, cleaners, specialties for the janitor supply house. Let us send further information.

•

HAMMOND

PAINT & CHEMICAL CO.

BEACON NEW YORK

ESTABLISHED 1875

Plant men say. . . . .

BLACKMER ROTARY PUMPS

"Sure can take it!"

THE PUMP THAT IS SELF-ADJUSTING FOR WEAR
FAMOUS BUCKET DESIGN

This pump has handled 7,000,000 gal. of varnish since 1928 . . . AND IT'S STILL IN SERVICE.

CAPACITIES FROM 5 to 700 GPM.
IF YOU BUY PUMPS ON A COST-PER-GALLON BASIS, HERE ARE PUMPS THAT WILL INTEREST YOU

STANDARD CONSTRUCTIONS:

Pumps with removable liners; without liners; steam-jacketed; and sanitary.
FURNISHED IN ALL STANDARD DRIVES.
Prompt delivery on all sizes.

A few of the materials handled by Blackmer Rotaries—

Acids	Hot fats
Alcohol	Liquid soaps
Caustics	Lube oils
Emulsions	Vegetable oils

BLACKMER ROTARY HAND PUMPS
54 standard models.
Capacities to 25 GPM

WRITE FOR NEW CATALOG.

BLACKMER PUMP COMPANY

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Exclusive Distributorship Open for southern territory on Garbex non-poisonous, garbage deodorant. Excellent proposition to right party. Address Garbex, Syracuse, N. Y.

For Sale—Holly pneumatic blower system for unloading finely powdered material from cars or boats including 70 feet screw conveyor. Driven by 49 H.P. Wisconsin gasoline engine rated capacity 10 tons per hour. All in good condition. Can be seen at 288 Green Street, Brooklyn, N. Y. Tex-ite Products Co. Tel. EVergreen 9-5858.

Rebuilt Guaranteed Machinery—Crutchers; Plodders; Jones Automatic Soap Press; Foot Presses; Proctor Soap Dryer; 12x30, and 16x40 Three Roll Water Cooled Steel Mills; 2, 3, and 4 Roll Stone Mills; Johnson Carton Sealers; Powder Fillers and Mixers; Chippers (vertical and horizontal; Mixers; Grinders; Boiling Kettles; Cutting Tables; Soap Frames; Filters and Filter Presses, etc. Send for Soap Bulletin No. 402. Stein Equipment Corp., 426 Broome St., New York City.

Wanted—Manufacturer desires to buy second-hand para block press in good condition. Suitable for making small blockettes and also large blocks if necessary. Give full details and price. G. H. Wood & Co., 323 Keele St., Toronto, Canada.

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REPLACE NATURALS

We are in a position to deliver better Perfume Oils for less money. Try samples of our ARTIFICIAL OILS and be convinced before buying.

OAK MOSS	$ 2.00 per lb.
Bergamot	2.25 per lb.
Geranium	2.25 per lb.
Lavender	2.00 per lb.
Lavender Spike	1.25 per lb.
Labdanum	2.25 per lb.
Orris Liquid	16.00 per lb.
Patchouli	2.00 per lb.
Vetivert	2.00 per lb.

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Write us for complete list of ARTIFICIAL OILS. Free working samples on request.

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We Are Manufacturers and Not Jobbers

We are Offering

Fifty Drums English High Boiling Low Temperature TAR ACIDS testing as follows:

Specific Gravity @ 60°	1.0240
Water	0.30%
Neutral Oils	0.50%
Pyridine Bases	0.09%
Total Tar Acids	99.11%

Immediate delivery from Phila. warehouse.
Samples gladly furnished upon request.

OTTO A. C. HAGEN CORP.

929 Public Ledger Building
Philadelphia, Pa.

MANILA GUM

Our Manila Gums are now widely used in *liquid floor waxes.* Have you tried them in your products? Write us for details.

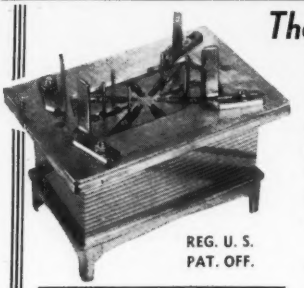
Also a full line of other spirit and oil soluble Natural Resins.

O. G. INNES CORPORATION
VARNISH GUMS
533-541 CANAL STREET
(NEAR WEST STREET)
NEW YORK, N. Y.

Telephone
WAlker 5-8481-2-3

Labeling EFFICIENCY *at* LOW COST *with*

The E-Z LABELER



REG. U. S. PAT. OFF.

Cut your Labor costs with this inexpensive, ingenious, new machine. Increase your production and get neat, uniform labeling at a surprisingly small initial cost and very low upkeep.

- SIMPLE IN DESIGN
- FOOLPROOF, STURDY CONSTRUCTION
- ADJUSTABLE TO ANY SIZE OR SHAPE LABEL
- ADJUSTABLE TO ANY SIZE OR SHAPE BOTTLE
- PORTABLE (reducing bottle and jar breakage)
- SIMPLE TO OPERATE
- PERFECT UNIFORMITY OF APPLICATION

FOR FRONT GUMMED LABELS OF ANY SHAPE OR SIZE FLAT BOTTLES, ROUND BOTTLES and JARS.

COMPLETE $50
(F.O.B. FACTORY)
Slightly higher for special cases. 10 DAY FREE TRIAL . . . use the E-Z LABELER in your plant for 10 days. If it doesn't save you time, money, and effort, return it without obligation.

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177 VAN BUREN STREET • NEWARK, N. J.

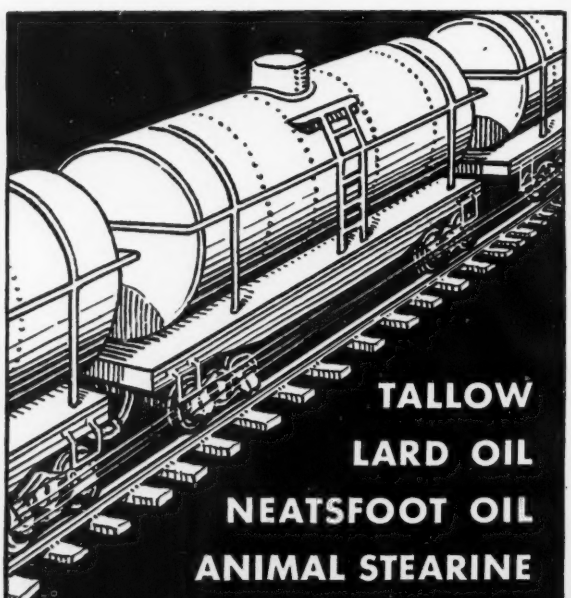
JOBBERS:

We offer the finest quality coconut oil liquid soap—with the following features.

1—made from best grade of cochin coconut oil
2—contains 5% glycerine
3—refrigerated to prevent cloudiness and sediment, to 7 degrees below freezing
4—potash saponified, and perfectly neutral
5—contains no fillers or other inert matter
6—aged in cypress wood tanks to make a milder and richer lathering soap
7—manufactured in concentrations of 10%, 15%, 20%, and 40% anhydrous soap, colored opal, amber, or natural (water-white) with or without perfume added.

Write us for samples and prices, and be convinced that you need not have any further complaints in order to satisfy your customers' liquid soap requirements.

Manufactured by
SANITARY SOAP COMPANY
Division of
SANITARY FLOOR COMPOUND CO.
(Mfgrs. of sanitary soaps, shampoos and cleaners since 1921)
104-108 Railroad Ave. Paterson, N. J.



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LARD OIL
NEATSFOOT OIL
ANIMAL STEARINE
ACIDLESS TALLOW OIL

Prompt Delivery—Drums, Barrels, or Tank Cars.

INDEPENDENT MANUFACTURING CO.
Bridesburg P. O. Philadelphia, Pa.

RAW MATERIALS AND EQUIPMENT

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index of Advertisements, page 157, for page numbers. *"Say you saw it in SOAP."*

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John A. Chew, Inc.
Columbia Chemical Div., Pittsburgh Plate Glass Co.
Diamond Alkali Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Michigan Alkali Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

BULK AND PRIVATE BRAND PRODUCTS

Ampion Corporation (Soaps and Sanitary Chemicals)
Associated Chemists, Inc. (Insecticides)
Baird & McGuire, Inc. (Disinfectants)
Buckingham Wax Corp. (Wax Products)
Candy & Co. (Wax Products)
Chemical Supply Co. (Disinfectants, etc.)
Davies-Young Soap Co. (Soaps and Floor Wax)
Empire Chemical Products Co. (Wax Products)
Federal Varnish Co. (Wax Products)
Franklin Research Co. (Floor Products)
Fuld Bros. (Soaps and Sanitary Chemicals)
R. Gesell, Inc. (Chemical Specialties)
James Good, Inc. (Sanitary Chemicals)
R. M. Hollingshead Corp. (Soap and Sanitary Chemicals)
Hysan Products Co. (Sanitary Chemicals)
Koppers Co. (Disinfectants)
Kranich Soap Co. (Potash Soaps)
Pecks Products Co. (Soaps and Sanitary Chemicals)
Philadelphia Quartz Co. (Detergents)
Reilly Tar & Chem. Co. (Floor Seals)
Sanitary Floor Compound Co. (Sanitary Chemicals)
Sweeping Compound Mfrs. Co. (Sweeping Compound)
Trojan Prods. Mfg. Co. (Rug and Upholstery Specialties)
Uncle Sam Chemical Co. (Sanitary Chemicals)
T. F. Washburn Co. (Wax Products)
White Tar Co. (Disinfectants, etc.)

CHEMICALS

American-British Chemical Supplies
Chemical Mfg. & Dist. Co.
John A. Chew, Inc.
Columbia Chemical Div., Pittsburgh Plate Glass Co.
Cowles Detergent Co.
Diamond Alkali Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries
General Chemical Co.
Hooker Electrochemical Co.
Industrial Chemical Sales Div.
Innis, Speiden & Co.
Michigan Alkali Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.
Rohm & Haas Co.
Reilly Tar & Chemical Corp.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)

American-British Chemical Supplies
Baird & McGuire, Inc.
Barrett Co.
Innis, Speiden & Co.
Koppers Co.
Mirvale Chemical Co.
Monsanto Chemical Co.
Pittsburgh Coal Carbonization Co.
Reilly Tar & Chemical Co.
White Tar Co.

COLORS

Fezandie & Sperrle
Interstate Color Co.
Pylam Products Co.
Tamms Silica Co.

CONTAINERS AND CLOSURES

American Can Co. (Tin and Fibre Cans, Steel Pails)
Anchor-Hocking Glass Corp. (Closures and Bottles)
Continental Can Co. (Tin Cans)
Crown Can Co. (Tin Cans and Steel Pails)
National Can Co. (Tin Cans)
Williams Sealing Corp. (Closures)

DEODORIZING BLOCK HOLDERS

Fuld Bros.
Hysan Products Co.

INSECTICIDES, SYNTHETIC

Associated Chemists, Inc.
Dodge & Olcott Co.
John Powell & Co.
Rohm & Haas Co.
U. S. Industrial Chemicals, Inc.
Velsicol Corp.
Whitmire Research Corp.

MACHINERY

Anthony J. Fries (Soap Dies)
Blackmer Pump Co. (Pumps)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Karl Kiefer Machine Co. (Filling Machinery)
Koppers Company (Coal Tar Plants, Power Plants, Valves, Castings, Pipe, Tanks)
J. M. Lehmann Co. (Soap Machinery)

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MACHINERY, (Contd.)

Mandel Products Co. (Label Paster)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Sprout, Waldron & Co. (Mixing, Conveying, etc.)
Stokes & Smith Co. (Packaging Machy.)

MACHINERY, USED

Consolidated Products Co.
Brill Equipment Corp.
Newman Tallow & Soap Machinery Co.

MISCELLANEOUS

American Standard Mfg. Co. (Wax Applicator and Mops).
Anchor-Hocking Glass Corp. (Metal Caps)
Crosby Naval Stores, Inc. (Pine Oil and Rosin)
Dow Chemical Co. (Germicides, Agricultural Insecticides, Fumigants)
Filtrol Corp. (Purifying and Decolorizing Clay)
Industrial Chemical Sales Div. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants)
Koppers Company (Coal, Coke, Roofing Materials)
Pennsylvania Refining Co. (White Oils)
Pylam Products Co. (Lathering Agent)
Reilly Tar & Chem. Co. (Preservatives)
Victoria Paper Mills Co. (Toilet Tissues)

OILS, FATS, AND FATTY ACIDS

Eastern Industries
Emery Industries, Inc.
Independent Manufacturing Co.
Industrial Chemical Sales Div.
Newman Tallow & Soap Machinery Co.
Orbis Products Corp. (Stearic Acid)
Welch, Holme & Clark Co.

PARADICHLORBENZENE

John A. Chew, Inc.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.

PERFUMING MATERIALS

American-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Davis Laboratories
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer Inc.
E. I. Du Pont de Nemours & Co.
Felton Chemical Corp.
Firmenich & Co.
Fritzsche Brothers, Inc.
General Drug Co.
Givaudan-Delawanna, Inc.
Geo. Lueders & Co.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Co.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
John Powell & Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

PETROLEUM PRODUCTS

Deodorized Insecticide Base, White Oils, Petrolatum, Paraffine Oils, Residues, etc.)

Atlantic Refining Co.
Pennsylvania Refining Co.
L. Sonneborn Sons, Inc.

PHOSPHATES

Trisodium, Sodium Pyrophosphate, etc.)

John A. Chew, Inc.
E. I. du Pont de Nemours & Co.
General Chemical Co.
Monsanto Chemical Works
Victor Chemical Works
Warner Chemical Co.

PYRETHRUM AND ROTENONE PRODUCTS

Insect Flowers and Powder, Pyrethrum Extract, Derris Products)

Associated Chemists, Inc.
Derris, Inc.
Dodge & Olcott Co.
Hammond Paint & Chem. Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
S. B. Penick & Co.
John Powell & Co.
R. J. Prentiss & Co.

SILICATES

Cowles Detergent Co.
E. I. du Pont de Nemours & Co.
General Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

SOAP DISPENSERS

Ampion Corp.
Bobrick Mfg. Co.
Chicago Precision Prods. Co.
Fuld Bros.

SPRAYERS

Breuer Electric Mfg. Co. (Electric)
Dula Mfg. Co. (Steam Sprayers)
Fumeral Co. (Pressure Sprayers, Steam, Air, CO_2 gas)

WAXES AND GUMS

Carnauba, Shellac, Candelilla, etc.)

O. G. Innes Corp.
Innis, Speiden & Co.
The Mac Lac Co. (Shellac)
Mantrose Corp. (Shellac)

PROFESSIONAL DIRECTORY

SKINNER & SHERMAN, INC.
246 Stuart Street Boston, Mass.
Bacteriologists and Chemists
Disinfectants tested for Phenol Coefficient. Toxicity Index determined by chick embryo method of Salle. Antiseptics tested by agar cup plate and other standard methods.
Chemical Analyses and Tests of All Kinds

STILLWELL AND GLADDING, Inc.
Analytical and Consulting Chemists
Members Association of
Consulting Chemists and Chemical Engineers
130 Cedar Street New York City

KILLING
strength of Insecticides
by PEET GRADY METHOD
PYRETHRINS in PYRETHRUM FLOWERS
(by Gnadinger or Seil Method)
We raised and killed more than 1 million flies in the last 2 years
ILLINOIS CHEMICAL LABORATORIES, INC.
GRIDLEY, ILLINOIS

FOSTER D. SNELL, INC.
Our staff of chemists, engineers and bacteriologists with laboratories for analysis, research, physical testing and bacteriology are prepared to render you
Every Form of Chemical Service
313 Washington Street Brooklyn, N. Y.

ALAN PORTER LEE, Inc.
Contracting and Consulting Engineers
Design and Construction of Equipment and Plants for Producing and Processing Fats, Oils, Soaps and Related Products
136 LIBERTY STREET, NEW YORK, N. Y.
Cable Address: "ALPORTLE", New York

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offering their services to manufacturers of soaps and sanitary specialties should apprise the industry of their facilities through this professional card department. SOAP reaches 4,000 firms needing help of a professional nature.

H. A. SEIL, Ph.D. E. B. PUTT, Ph.C., B.Sc.
SEIL, PUTT & RUSBY, INC.
Analytical and Consulting Chemists
Specialists in the Analysis of Organic Insecticides, Pyrethrum Flowers, Derris Root, Barbasco, or Cube Root—Their Concentrates and Finished Preparations
DRUGS — ESSENTIAL OILS — SOAP
16 East 34th Street, New York, N. Y.

Soaps • Waxes • Polishes
Detergents • Disinfectants
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Hochstadter Laboratories INCORPORATED
254 West 31st St. New York City

CONSULTANTS
offering their services to manufacturers of soaps and sanitary specialties should apprise the industry of their facilities through this professional card department. SOAP reaches 4,000 firms needing help of a professional nature.

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All cases submitted given personal attention
Form "Evidence of Conception" with instructions for use and "Schedule of Government and Attorneys' Fees"—Free
Lancaster, Allwine & Rommel
PATENT LAW OFFICES
Suite 402, Bowen Building Washington, D. C.

Refer To Your 1941
BLUE BOOK
for F.D.A. Method for Testing of Disinfectants and Antiseptics.
Official N.A.I.D.M. Method for Testing and Grading of Insecticides.
Free with a $3.00 subscription to SOAP.
$4.00 Foreign
MAC NAIR-DORLAND CO.
Publishers
254 W. 31st Street New York, N. Y.

. . . Official Test Insecticide

STOCKS of the new 1941 Official Test Insecticide are now available for immediate shipment from the office of this Association. The 1941 O.T.I. is required for all testing and grading of fly sprays by the official Peet-Grady Method. The 1941 O.T.I. will remain official until June 1, 1942.

Directions for use of the O.T.I. and the technique of the Peet-Grady Method are given in a booklet, a copy of which is included in each carton of O.T.I.

The O.T.I. is available at $5.00 per dozen bottles, plus shipping costs, to members of this Association. To non-members, there is an additional service charge of $1.00 per dozen bottles. Single bottles are $1.00 each. Check with order is required.

▼

National Association of Insecticide & Disinfectant Manufacturers, Inc.

110 East 42nd Street New York

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H. W. Hamilton . . White Tar Co. of N. J., Kearny, N. J.
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* * *

If more buyers would consult the trade associations in the fields wherein they must buy, they would come up with much more satisfactory and workable specifications. But too many try to write their own specifications without knowing what they are writing.

* * *

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